Date Due: April 10, 2019
DUE NO LATER THAN 11:00 A.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: Northside Legacy Clinic and Modular Relocation

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:
Cheris Kotalik
Construction Manager
5515 S Loop E, Suite B
Houston, Texas 77033

For additional information, contact Cheris Kotalik at cheris.kotalik@yesprep.org or 346-235-5776 .

A ONE TIME ONLY BID WALK WILL TAKE PLACE ON THURSDAY, APRIL 4, 2019 AT 9AM. PLEASE CONTACT CHERIS KOTALIK FOR ADDRESS AND CHECK-IN INFORMATION.

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 alterations are clearly noted in your proposal submission.]

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 Cheris Kotalik, Construction Manager, immediately at cheris.kotalik@yesprep.org or 346-235-5776.

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. Financial Statement
   F. Proposed Exceptions, Alterations, Additions, or Modifications to RFP (if any)
   G. Scoring Rubric

INTRODUCTION

YES Prep Public Schools is a free, open-enrollment public school system that serves 6,600 students across thirteen (13) 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 11:00 a.m. (local time), **April 10, 2019**. Every proposal must be enclosed in an envelope clearly marked "East End Modular Replacement and Removal", and shall include one copy.

All questions, requests, responses, and proposals shall be submitted to:
Cheris Kotalik-Construction Manager
Yes Prep Public Schools
5515 S Loop E, Suite B
Houston, TX 77033
cheris.kotalik@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: *http://www.yesprep.org/notices*

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 11:00 a.m. (local time) on **April 10, 2019.** 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.

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 Cheris Kotalik, Construction Manager, one complete proposal form, and one complete copy, 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 Cheris Kotalik 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.

SCORING RUBRIC

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;
3. 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.

SPECIFICATIONS

YES Prep Public Schools is a free, open-enrollment public school system that serves 6,600 students across eleven (11) 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 is seeking a Vendor to relocate restroom trailer onsite, bring in modular unit from YES Southwest campus and renovate classroom into Legacy Clinic. A complete proposal shall include the following:

- Vendor is responsible for everything included in the drawings provided with this RFP package; including but not limited to:
    - Disconnecting all utilities, decking and canopy on the restroom modular unit to prepare for its relocation. Canopy and decking should be removed in a manner they can be tied back into with the classroom modular.
    - Disconnecting all utilities, decking and canopy on the modular unit coming from the Southwest Campus.
    - Moving modular classroom unit from the Southwest Campus to Northside Campus, including any permits required for the move.
    - Reconnecting all utilities to the restroom and classroom modular.
    - Repair/replacement of concrete curb in order to get the modular units in place.
    - Replace VCT flooring in modular classroom building.
    - Provide (2) new tackboards for each classroom in the modular building. Claridge Colored Cork on Hardboard, Series 1100, Color #100 Tax, 4' x4'.
    - Connect all utilities to the modular buildings for usage.
    - Ensure roof on the modular units is water tight after unit is set in place.
    - Make sure all decking, handrails, guardrails and canopies are tied back-in after modular units set in place. Repair/replace materials as needed to ensure a quality product.
- New concrete sidewalk.
- All demolition and buildback for the Legacy Clinic space.
- All trade permits required for the scope of work being bid.
- All equipment necessary to perform work.
- Debris removal off-site (Owner will not provide a dumpster).
- Portable toilet for workers to use (Owner will not provide a portable toilet).

Classroom modular that will be relocated will be coming from 4411 Anderson Road.

REQUIRED SUBMITTALS
(Attachment A)

Submittal 1
Experience in Project Management
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 April 10, 2019 by 11:00 AM. 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 ½ 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
    - 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: $1,000,000
- 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.

FINANCIAL REQUIREMENTS
(Attachment E)

Complete this form or provide audited financial statements and include with your proposal package.

FINANCIAL STATEMENT

Condition of Vendor at close of business Month, _____, 2018.

ASSETS

1.	Cash on hand		$_____	
	In Bank		$_____	
	Elsewhere		$_____	$_____
2.	Accounts receivable from completed contracts (exclusive of claims not approved for payment)			_____
3.	Accounts receivable from other sources than above			_____
4.	Amounts earned on uncompleted contracts (not included in Item 3) (Contract price on completed portion of uncompleted contracts less total cost of completed portion.)			_____
5.	Deposits for bids or other guarantees			_____
6.	Notes receivable	Past due	$_____	
		Due 90 days	$_____	
		Due Later	$_____	
7.	Interest earned			_____
8.	Real Estate			
	Business Property, Present value		$_____	
	Other property		$_____	_____
9.	Stocks and Bonds		$_____	
	Listed on exchange		$_____	
	Unlisted		$_____	_____
10.	Equipment, machinery, fixtures		$_____	
	Less Depreciation		$_____	_____
11.	Other Assets			_____
			TOTAL ASSETS	$_____

FINANCIAL REQUIREMENTS
(Attachment E, Cont.)

LIABILITIES AND NET WORTH

1.	Notes Payable	To banks regular	$_____	
		(For certified check)	_____	
		Equip. Obligations	_____	
		Others	_____	$_____
2.	Accounts Payable Current		$_____	
		Past Due	_____	_____
3.	Real Estate Mortgages			_____
4.	Other Liabilities			_____
5.	Reserves			_____
6.	Capital Stock Paid up Common			_____
		Preferred	_____	_____
7.	Surplus			_____
TOTAL LIABILITIES AND NET WORTH				$_____

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

Vendor should submit as Attachment F, any and all proposed exceptions, alterations, additions, or modifications to the YES RFP for Northside Legacy Clinic and Modular Relocation.

SCORING RUBRIC
(ATTACHMENT G)

YES will utilize the following RFP Evaluation Rubric for evaluation of all Northside Legacy Clinic and Modular Relocation Proposals:

1. **Charges/Cost to YES PREP: 30 Points.**
    a. Favorable = 30 Points. Unfavorable = 0 points.
    b. Evaluate the Overall Value of proposed materials and services to be provided.

2. **Technical and Education Experience: 17.5 Points.**
    a. Favorable = 17.5 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: 17.5 Points.**
    a. Favorable = 17.5 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. **Design and Technical Execution: 17.5 Points.**
    a. Favorable = 17.5 Points. Unfavorable = 0 points.
    b. Proposal includes information about the Vendor's ability to provide an efficient and cost-effective solution. Please include resources available to achieve the project and any concepts or innovations in design that have proven effective in the past that would be applicable to this model.

5. **Project Understanding and Methodology: 17.5 Points.**
    a. Favorable = 17.5 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
Northside Legacy Clinic and Modular Relocation

YES PREPARATORY PUBLIC SCHOOLS

NORTHSIDE LEGACY CLINIC
5215 Jensen Dr., Houston, Texas 77026
Harris County

PLAN INDEX

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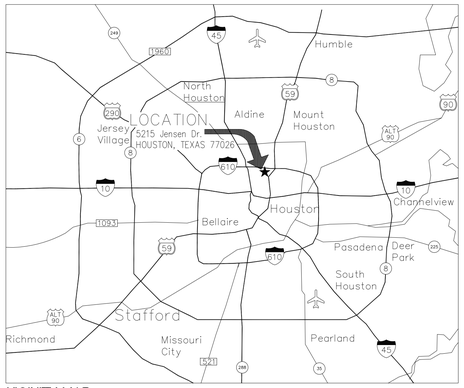


VICINITY MAP

NORTH

CODE ANALYSIS

2012 INTERNATIONAL BUILDING CODE WITH HOUSTON AMENDMENTS
2012 INTERNATIONAL FIRE CODE WITH HOUSTON AMENDMENTS
2012 INTERNATIONAL UNIFORM PLUMBING CODE WITH HOUSTON AMENDMENTS
2012 INTERNATIONAL UNIFORM MECHANICAL CODE WITH HOUSTON AMENDMENTS
2017 NATIONAL ELECTRICAL CODE
2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH HOUSTON AMENDMENTS

ALLOWABLE BUILDING HEIGHTS AND AREAS

TABLE 503

OCCUPANCY CLASSIFICATION:	GROUP E – EDUCATION (6TH – 12TH GRADES)
SPRINKLERED:	NO
CONSTRUCTION TYPE:	TYPE V–B
HEIGHT:	1 STORY
ALLOWABLE AREA PER PORTABLE BLDG. (E OCCUPANCY):	9,500 SF
ACTUAL AREA PER FLOOR (CLASSROOM:)	1,536 SF
ACTUAL AREA PER FLOOR (RESTROOM:)	456 SF
ALLOWABLE HEIGHT PER LEVEL (E OCCUPANCY):	40 FEET (1 STORY)
ACTUAL HEIGHT PER FLOOR:	13'–0" (1 STORY)

FIRE RATING REQUIREMENTS (TABLE 601)

TYPE V–B CONSTRUCTION

BUILDING ELEMENT	RATING IN HOURS
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS	0
NON BEARING EXTERIOR WALLS	0 (PER TABLE 602)
NON BEARING INTERIOR WALLS	0
FLOORS	0
ROOF	0

OCCUPANCY AND LOAD EXIT REQUIREMENTS

27,259 CLASSROOM S.F.
= 27,259 S.F. @ 1 OCCUPANT / 28 S.F. = 974 STUDENTS (PER T.E.A.)

TOTAL OCCUPANCY:
975 STUDENTS + 80 STAFF = 1,055 TOTAL OCCUPANTS

SECTION 1021.2.4
MINIMUM NUMBER OF EXITS REQUIRED @ NEW PORTABLE BUILDINGS = 1 PER BUILDING
NUMBER OF EXITS PROVIDED @ NEW PORTABLE BUILDINGS = 1 PER BUILDING

TABLE 1016.2
MAXIMUM REQUIRED TRAVEL DISTANCE TO EXIT =
250 FEET W/ SPRINKLER SYSTEM
ACTUAL MAXIMUM TRAVEL DISTANCE TO EXIT = LESS THAN 250 FEET

SECTION 1005.3.2
REQUIRED EGRESS WIDTH PER OCCUPANT = 0.15" OTHER COMPONENTS
DOORS @ EACH CLASSROOM BUILDING: = 52 OCCUPANTS X .15 = 7.7"

EXIT WIDTH PROVIDED = 36" @ EACH CLASSROOM BUILDING

PARKING REQUIREMENTS

REFER TO SHEET AS100

PLUMBING FACILITIES REQUIREMENTS

USE GROUP	OCCUPANT LOAD	WATER CLOSETS		LAVATORIES		DRINKING FOUNTAINS	SERVICE SINKS
		MALE	FEMALE	MALE	FEMALE		
B		1/25 TO 50, THEN 1/50		1/40 TO 80, THEN 1/80		1 PER 100	1
E		1 PER 50		1 PER 50		1 PER 100	1
REQUIRED FACILITIES PER OCCUPANT LOAD							
USE GROUP	OCCUPANT LOAD	WATER CLOSETS		LAVATORIES		DRINKING FOUNTAINS	SERVICE SINKS
	1,054 OCC.	MALE	FEMALE	MALE	FEMALE		
B	80 STAFF	1 MALE 1 FEMALE		1 MALE 1 FEMALE			
E	974 STUDENTS 487 GIRLS 487 BOYS	10 FEMALE 10 MALE		6 FEMALE 6 MALE		6	1
ACTUAL FACILITIES PER OCCUPANT LOAD							
USE GROUP	OCCUPANT LOAD	WATER CLOSETS		LAVATORIES		DRINKING FOUNTAINS	SERVICE SINKS
	558 OCC.	MALE	FEMALE	MALE	FEMALE		
B	80	3 FEMALE 3 MALE		1 FEMALE 1 MALE			
E	974 STUDENTS 487 GIRLS 487 BOYS	10 FEMALE 10 MALE		12 FEMALE 12 MALE		6	1

MARCH 8, 2019
Issue for Permit/Pricing

ALPINE ENGINEERING
CIVIL ENGINEER
2821 JORDENS ROAD, SUITE 100
HOUSTON, TX 77084
(281)953–0044
ATTN: DANNY MARTIN, P.E.

DAWSON VAN ORDEN ENGINEERING
MECHANICAL / ELECTRICAL / PLUMBING ENGINEER
825 TOWN AND COUNTRY LANE, SUITE 1150
HOUSTON, TX 77024
(281)293–7500
ATTN: ROBERT ALFORD

ELEMENT ARCHITECTS
ARCHITECT
1250 WOOD BRANCH DRIVE, SUITE 480
HOUSTON, TX 77079
(713)874–0775
ATTN: PATRICK HELEMANN

YES PREP PUBLIC SCHOOLS
OWNER
5515 SOUTH LOOP EAST, SUITE B
HOUSTON, TX 77033
(713)967–9000
ATTN: KEITH WEAVER

YES Prep
Public Schools

STATE OF TEXAS

COUNTY OF HARRIS

We, Yes Prep Public Schools Inc. acting by and through Christopher Barbic, Chief Executive Officer, and Robert McBurnett, Chief Financial Officer, being officers of Yes Prep Public Schools, Inc., owners hereinafter referred to as Owners of the 8.2811 acre tract described in the above and foregoing map of YES PREP JENSEN, do hereby make and establish said subdivision and development plan of said property according to all lines, dedications, restrictions and notations on said maps or plat and hereby dedicate to the use of the public forever, all streets (except those streets designated as private streets, or permanent access easements), alleys, parks, water courses, drains, easements and public places shown thereon for the purposes and considerations therein expressed; and do hereby bind ourselves, our heirs, successors and assigns to warrant and forever defend the title on the land so dedicated.

FURTHER, Owners have dedicated and by these presents do dedicate to the use of the public for public utility purposes forever unobstructed aerial easements. The aerial easements shall extend horizontally an additional eleven feet, six inches (11'6") for ten feet (10'0") perimeter ground easements or seven feet, six inches (7'6") for fourteen feet (14'0") perimeter ground easements or five feet, six inches (5'6") for sixteen feet (16'0") perimeter ground easements, from a plane sixteen feet (16'0") above ground level upward, located adjacent to and adjoining said public utility easements that are designed with aerial easements (U.E. and A.E.) as indicated and depicted, hereon, whereby the aerial easement totals twenty one feet, six inches (21'6") in width.

FURTHER, Owners have dedicated and by these presents do dedicate to the use of the public for public utility purposes forever unobstructed aerial easements. The aerial easements shall extend horizontally an additional ten feet (10'0") for ten feet (10'0") back-to-back ground easements, or eight feet (8'0") for fourteen feet (14'0") back-to-back ground easements or seven feet (7'0") for sixteen feet (16'0") back-to-back ground easements, from a plane sixteen feet (16'0") above ground level upward, located adjacent to both sides and adjoining said public utility easements that are designed with aerial easements (U.E. and A.E.) as indicated and depicted hereon, whereby the aerial easement totals thirty feet (30'0") in width.

FURTHER, Owners do hereby declare that all parcels of land designated as lots on this plat are originally intended for the construction of single family residential units thereon and shall be restricted for same under the terms and conditions of such restrictions filed separately.

FURTHER, Owners do hereby covenant and agree that all of the property within the boundaries of this plat is hereby restricted to prevent the drainage of any septic tanks into any public or private street, permanent access easement, road or alley or any drainage ditch, either directly or indirectly.

FURTHER, Owners do hereby dedicate to the public a strip of land fifteen feet (15') wide on each side of the center line of any and all bayous, creeks, gullies, ravines, draws, sloughs, or other natural drainage courses located in said plat, as easements for drainage purposes, giving the City of Houston, Harris County, or any other governmental agency, the right to enter upon said easement at any times for the purpose of construction and maintenance of drainage facilities and structures.

FURTHER, Owners do hereby covenant and agree that all of the property within the boundaries of this plat and adjacent to any drainage easement, ditch, gully, creek or natural drainage way is hereby restricted to keep such drainage ways and easements clear of fences, buildings, planting and other obstructions to the operations and maintenance of the drainage facility and that such abutting property shall not be permitted to drain directly into this easement except by means of an approved drainage structure.

FURTHER, Owners hereby certify that this replat does not attempt to alter, amend, or remove any covenants or restrictions; we further certify that no portion of the preceding plat was limited by deed restriction to residential use for not more than two (2) residential units per lot.

IN TESTIMONY WHEREOF, Yes Prep Public Schools Inc. has caused these presents to be signed by Christopher Barbic, Chief Executive Officer, thereunto authorized, attested by its Chief Executive Officer, Robert McBurnett, this _____ day of _____ , 2011.

Yes Prep Public Schools Inc.

By: _____ Attest: _____
Christopher Barbic, Chief Executive Officer — Robert McBurnett, Chief Financial Officer

STATE OF TEXAS

COUNTY OF HARRIS

BEFORE ME, the undersigned authority, on this day personally appeared Christopher Barbic, Chief Executive Officer and Robert McBurnett, Chief Financial Officer, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same for the purposes and considerations therein expressed, and in the capacity therein and herein stated, and as the act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this _____ of _____, 2011.

_____
Notary Public in and for the State of Texas

My Commission Expires:

_____

I, Walter E. Smith, am registered under the laws of the State of Texas to practice the profession of surveying and hereby certify that the above subdivision is true and correct; was prepared from an actual survey of the property made under my supervision on the ground; that all boundary corners, angle points, points of curvature and other points of reference have been marked with iron (or other suitable permanent metal) pipes or rods having an outside diameter of not less than three quarter (3/4) inch and a length of not less than three (3) feet; and the plat boundary has been tied to the state plane coordinate system (NAD83).

_____
Walter E. Smith
Texas Registration No. 1982

This is to certify that the Planning Commission of the City of Houston, Texas, has approved this plat and subdivision of YES PREP JENSEN in conformance with the laws of the State of Texas and the ordinances of the City of Houston as shown hereon and authorized the recording of this plat this _____ day of _____, 2011.

By: _____
Mark A. Kilkenny, Chair
or M. Sonny Garza, Vice Chairman

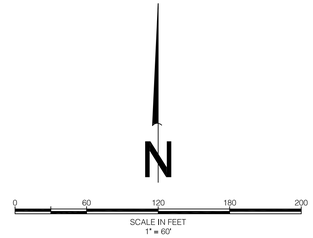
By: _____
Marlene L. Gafrick
Secretary

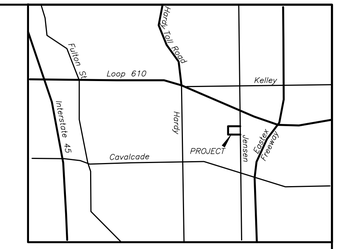
I, Stan Stanart, Clerk of the County of Harris County, do hereby certify that the within instrument with its certificate of authentication was filed for registration in my office on _____, 2011, at _____ o'clock ____ M., and duly recorded on _____, 2011, at _____ o'clock ____ M., and in Film Code Number _____ of the Map Records of Harris County for said county.

Witness my hand and seal of office, at Houston, the date and day last above written.

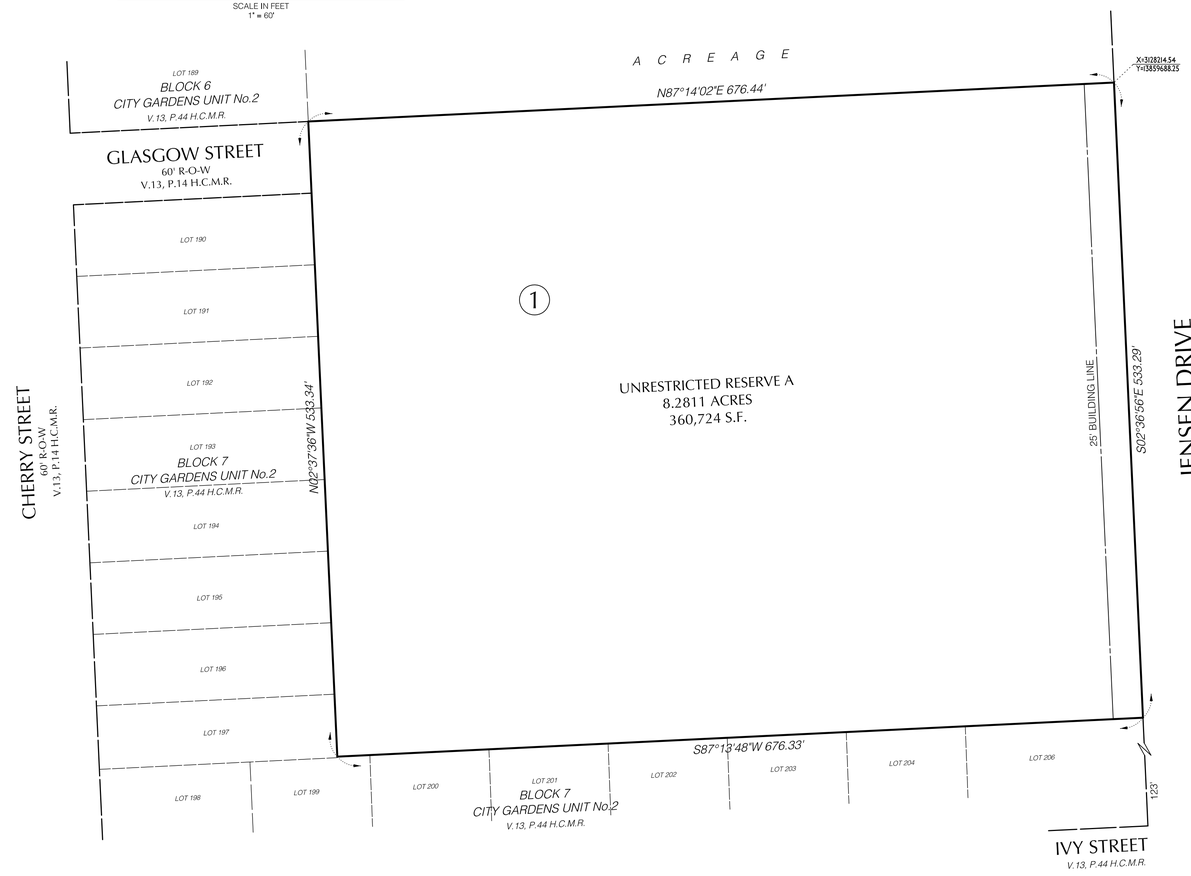
_____
Stan Stanart
Clerk of the County Court
Harris County, Texas

By: _____
Deputy

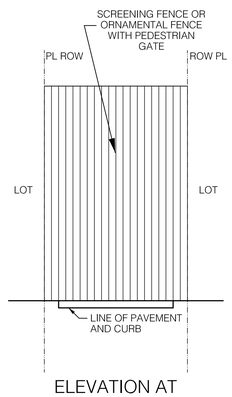




LOCATION MAP-Not to Scale



REASON FOR REPLAT:
TO CREATE ONE UNRESTRICTED RESERVE.



ELEVATION AT
END OF RIGHT-OF-WAY

N.T.S.

STUB STREET TERMINATION NOTE:

CONSTRUCT A WOOD, CONCRETE OR MASONRY OPAQUE SCREENING FENCE WITH A MINIMUM HEIGHT OF SIX FEET THAT EXTENDS THE WIDTH OF THE RIGHT-OF-WAY OF THE STUB STREET IF THE ADJACENT PROPERTY DOES NOT MEET THE CRITERIA OF SEC.42-135 SUBSECTION (b) ITEM (1).

GENERAL BUILDING LINE NOTE:

UNLESS OTHERWISE INDICATED, THE BUILDING LINES (B.L.), WHETHER ONE OR MORE, SHOWN ON THIS SUBDIVISION PLAT ARE ESTABLISHED TO EVIDENCE COMPLIANCE WITH THE APPLICABLE PROVISIONS OF CHAPTER 42, CODE OF ORDINANCES, CITY OF HOUSTON, TEXAS, IN EFFECT AT THE TIME THIS PLAT WAS APPROVED, WHICH MAY BE AMENDED FROM TIME TO TIME.

PARK SECTOR NOTE:

THIS UNRESTRICTED RESERVE IS LOCATED IN PARK SECTOR 17.

COORDINATE NOTE:

THE COORDINATES SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE No.4204 STATE PLANE GRID COORDINATES (NAD83) AND MAY BE BROUGHT TO THE SURFACE BY APPLYING THE FOLLOWING COMBINED GRID FACTOR OF 0.99989926623.

WASTEWATER COLLECTION NOTE:

THIS UNRESTRICTED RESERVE SHALL HAVE AN ADEQUATE WASTE-WATER COLLECTION SYSTEM.

ABBREVIATIONS:
1. H.C.M.R. DENOTES HARRIS COUNTY MAP RECORDS.
2. H.C.D.R. DENOTES HARRIS COUNTY DEED RECORDS.
3. H.C.C.F. No. DENOTES HARRIS COUNTY CLERK'S FILE NUMBER.
4. UTIL. ESMT. OR U.E. DENOTES UTILITY EASEMENT.
5. BLDG. LINE OR B.L. DENOTES BUILDING LINE.
6. GAR. BLDG. LINE OR G.B.L. DENOTES GARAGE BUILDING LINE.
7. W.L.E. DENOTES WATER LINE EASEMENT.
8. S.S.E. DENOTES SANITARY SEWER EASEMENT.
9. VIS. TRI. DENOTES VISIBILITY TRIANGLE.

YES PREP JENSEN

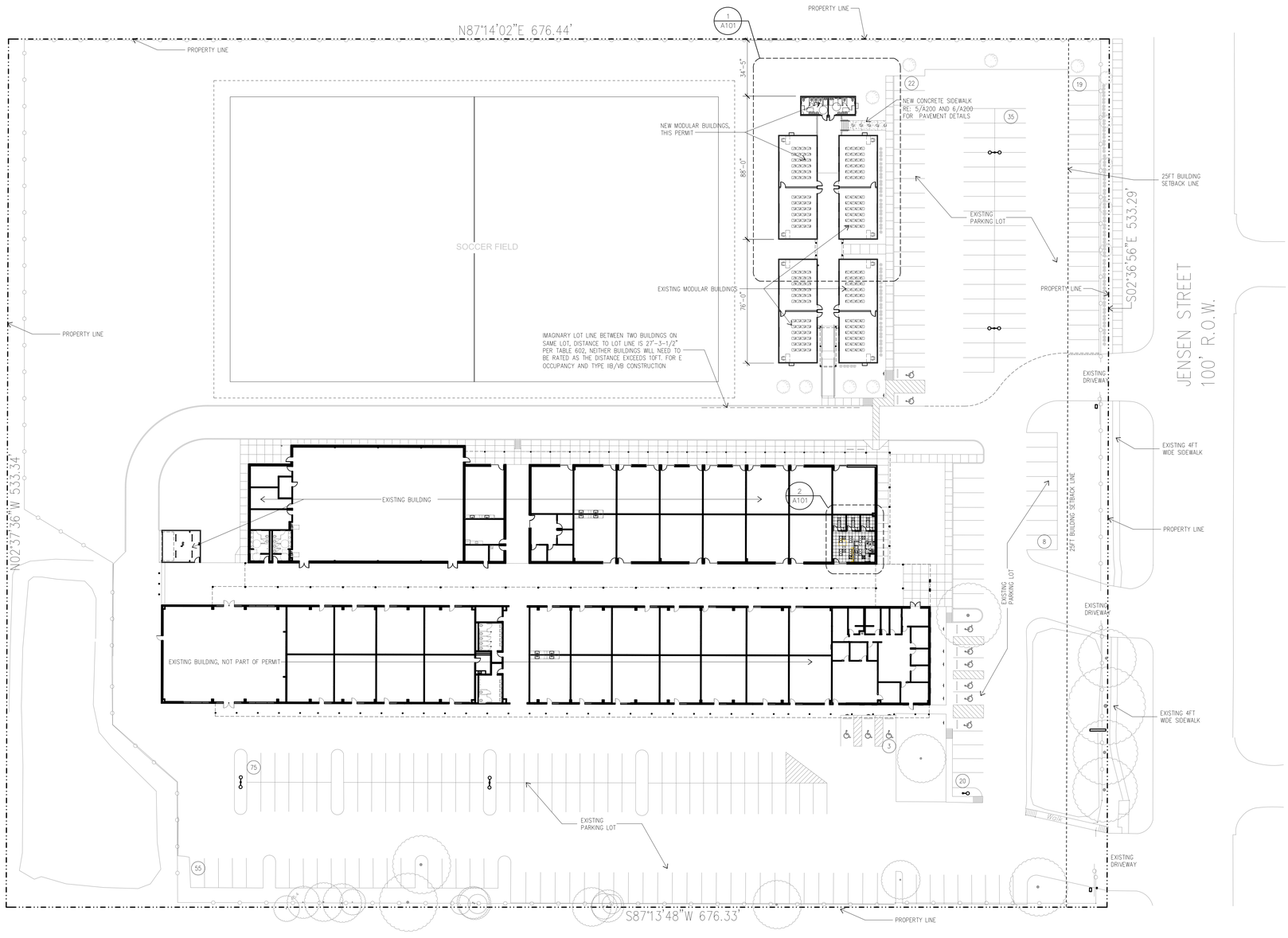
A SUBDIVISION OF
8.2811 ACRES OF LAND IN THE
J.S. COLLINS SURVEY, A-195
CITY OF HOUSTON
HARRIS COUNTY, TEXAS
ALSO PARTIALLY BEING A REPLAT OF
RESERVE A, BLOCK 1
AIRBORNE EXPRESS
FILM CODE No.365104 H.C.M.R.

1 BLOCK 1 RESERVE

APRIL, 2011
SCALE: 1" = 60'

OWNER: YES PREP PUBLIC SCHOOLS INC.
CHRISTOPHER BARBIC, CHIEF EXECUTIVE OFFICER

Arborleaf Engineering & Surveying, Inc.
16000 Steubner Airline Road #200
Spring, Texas 77379
281-655-0634



OCCUPANCY CALCULATIONS

27,259 S.F. @ 1 OCCUPANT / 28 S.F. = 974 STUDENTS (PER T.E.A.)

TOTAL OCCUPANCY:
974 STUDENTS + 80 STAFF = 1,054 TOTAL OCCUPANTS

PARKING REQUIREMENTS:

REQUIRED PARKING:
474 HIGH SCHOOL STUDENTS @ 1 SPACE / 3 STUDENTS = 158 SPACES
580 MIDDLE SCHOOL STUDENTS @ 1 SPACE / 7 STUDENTS = 83 SPACES
TOTAL SPACES REQUIRED: 241 SPACES

PROVIDED PARKING::
163 EXISTING PARKING SPACES
9 ACCESSIBLE PARKING SPACES
154 STANDARD PARKING SPACES

76 NEW PARKING SPACES
2 ACCESSIBLE PARKING SPACES
74 STANDARD PARKING SPACES

BIKE RACK W/ 8 BIKE SPACES EACH = 2 PARKING SPACES

TOTAL SPACES PROVIDED: 241 SPACES

(xx) NUMBER OF EXISTING PARKING SPACES

LANDSCAPING REQUIREMENT:

NO NEW PARKING ADDED – NO NEW LANDSCAPING REQURIED

LEGAL DESCRIPTION

A SUBDIVISION OF
8.2811 ACRES OF LAND IN THE
J.S. COLLINS SURVEY, A-195
CITY OF HOUSTON
HARRIS COUNTY, TEXAS
ALSO PARTIALLY BEING A REPLAT OF
RESERVE A, BLOCK 1
AIRBORNE EXPRESS
FILM CODE No.365104 H.C.M.R.

1 BLOCK 1 RESERVE

NO NEW PARKING LOT PAVING AREA
NEW 6FT. SIDEWALK PAVING AREA: 140 SF
TOTAL: 140 SF

NORTH

ARCHITECTURAL SITE PLAN SCALE: 1" = 30'-0" 1

yes prep
PUBLIC SCHOOLS

03/08/19

2007 Ea architects

ALPINE ENGINEERING & CONSTRUCTION

DAWSON VAN ORDEN
CIVIL • MECHANICAL • ELECTRICAL • PLUMBING
5850 SAN FELIPE, SUITE 140, HOUSTON TX 77057
office: 713.266.8984
www.dvoeng.com
REGISTRATION NO. F-8334

No.	Description	Date
	ISSUE FOR PERMIT	03/08/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

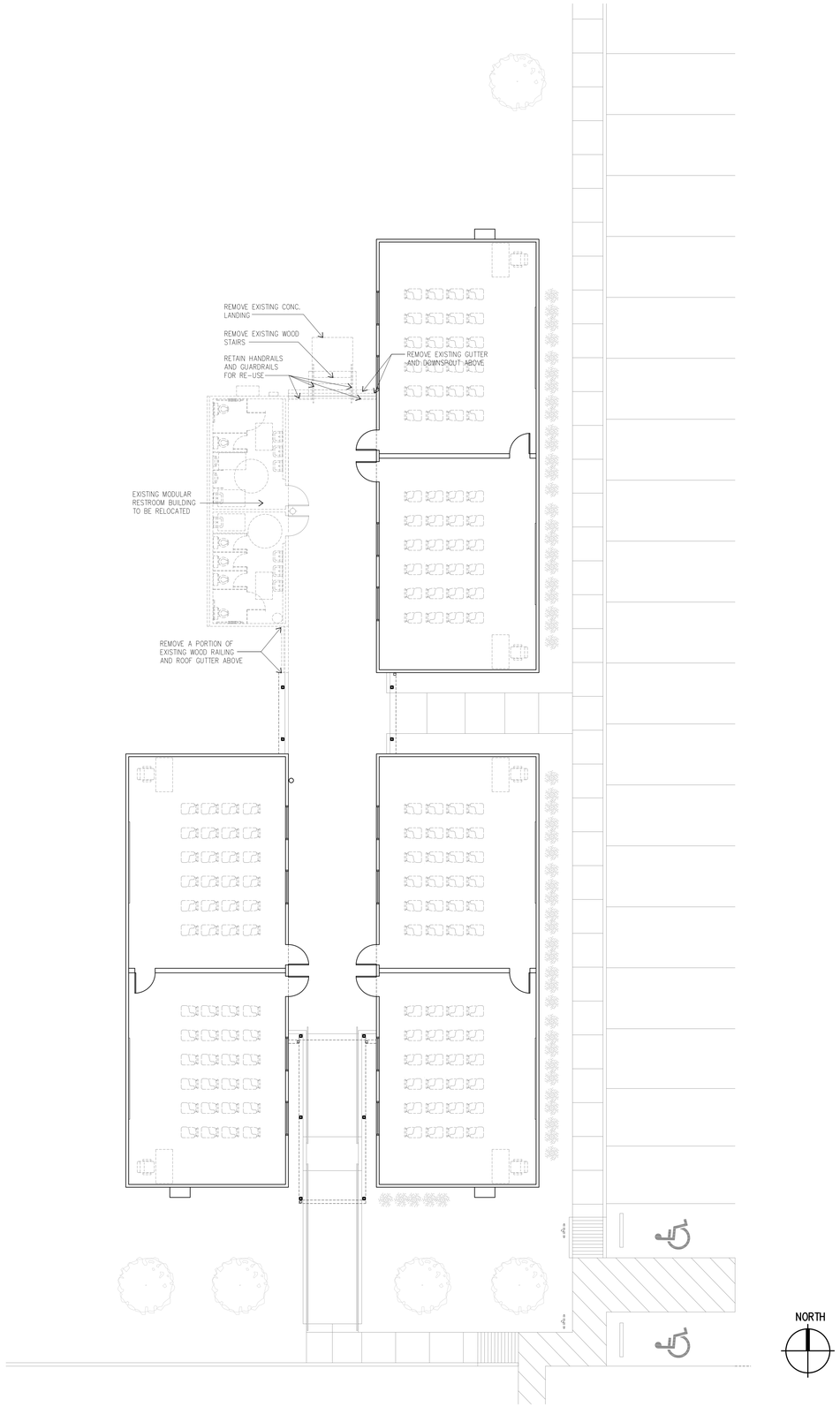
5215 JENSEN ST.
HOUSTON, TX 77026

ARCHITECTURAL SITE PLAN

Project Number	17018
Date	03/08/19
Drawn By	
Checked By	

AS100

Scale



DEMOLITION PLAN – MODULAR BUILDINGS SCALE: 1/8" = 1'-0" 1

yes prep PUBLIC SCHOOLS

03/08/19

2007 Ea architects

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REGISTRATION NO. F-8334

No.	Description	Date
	ISSUE FOR PERMIT	03/08/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

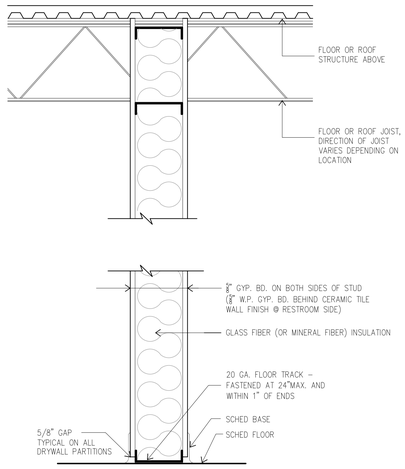
5215 JENSEN ST.
HOUSTON, TX 77026

DEMOLITION FLOOR PLAN

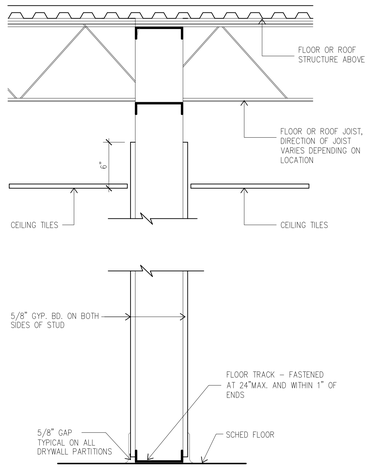
Project Number	17018
Date	03/08/19
Drawn By	
Checked By	

D101

Scale



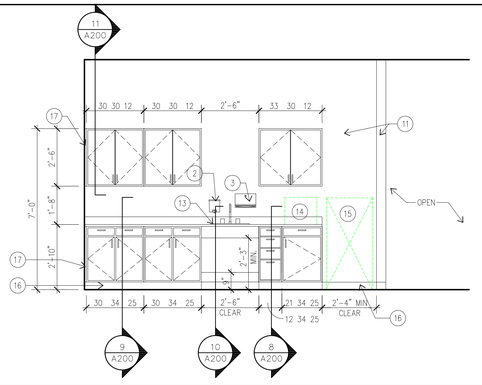
TYPE	STUD SIZE	STUD GAUGE	STUD SPACING	WALL THICKNESS	INSULATION	FIRE RATING	U.L. TEST NUMBER	STC RATING
4	3 5/8"	PROSTUD 25	16"O.C.	4-7/8"	3 1/2"	NONE		



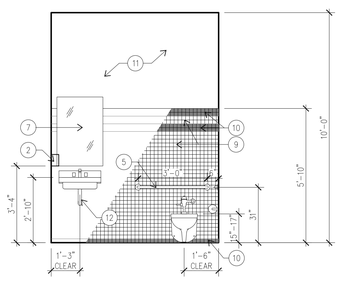
TYPE	STUD SIZE	STUD GAUGE	STUD SPACING	WALL THICKNESS	INSULATION	FIRE RATING	U.L. TEST NUMBER	STC RATING
5	3-5/8"	PROSTUD 25	16"O.C.	4-1/4"	–			

PARTITION TYPES

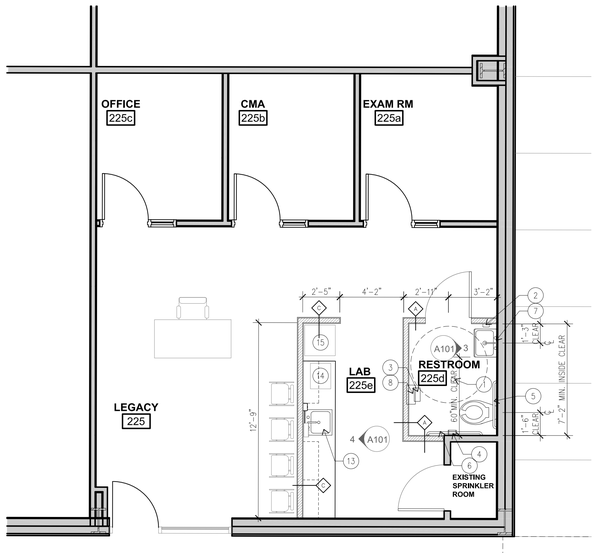
SCALE: 1 1/2" = 1'-0" | 5



LAB ELEVATION SCALE: 3/8" = 1'-0" | 4



RESTROOM ELEVATION SCALE: 3/8" = 1'-0" | 3



GENERAL NOTES

1. FIELD VERIFY EXISTING BUILDING DIMENSIONS PRIOR TO CONSTRUCTION. IF DIMENSION DIFFERS, NOTIFY ARCHITECT.
2. DO NOT SCALE DRAWING IF DIMENSIONS ARE IN QUESTION. OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE CONTINUING THE WORK.
3. FLOOR PLAN DIMENSIONS ARE TO CENTER LINE OF COLUMN OR TO FINISH FACE OF WALL.
4. CONTRACTOR SHALL VISIT PROJECT SITE TO FAMILIARIZE HIMSELF WITH THE SCOPE OF WORK AND TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING. ANY UNCLEAR ITEMS OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO SUBMITTING PROPOSAL.
5. REFER TO DETAIL 7/A200 FOR NEW INTERIOR FINISH SPECIFICATIONS

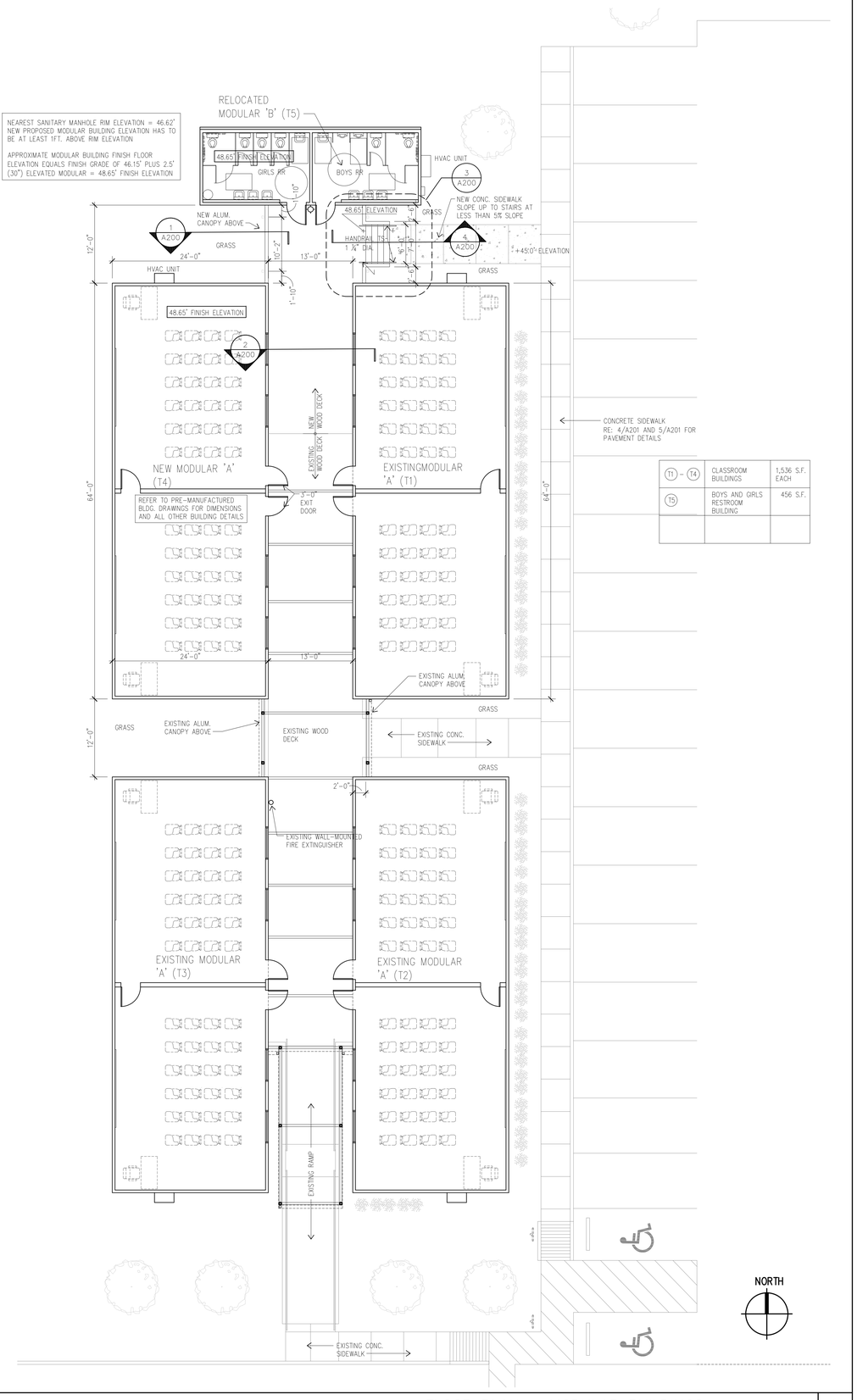
PLAN/ELEVATION KEYNOTES

1. FLOOR DRAIN, RE:PLUMBING DRAWINGS
2. SOAP DISPENSER, BY OWNER (PROVIDED BY GEORGIA PACIFIC), INSTALLED BY CONTRACTOR
3. PAPER TOWEL DISPENSER, BY OWNER, (PROVIDED BY GEORGIA PACIFIC), INSTALLED BY CONTRACTOR
4. TOILET TISSUE DISPENSER, BY OWNER (PROVIDED BY GEORGIA PACIFIC), INSTALLED BY CONTRACTOR
5. 36" GRAB BAR, RE:SPECIFICATIONS
6. 42" GRAB BAR, RE:SPECIFICATIONS
7. 24"W X 36"H MIRROR – MOUNT BTM. @ 40" A.F.F MAX.
8. SEMI-RECESSED TRASH RECEPTACLE, BRADLEY MODEL 344-10 SEMI-RECESSED, 22 GAUGE STAINLESS
9. 2x2 CERAMIC TILE, COLOR A (FIELD COLOR)
10. 2x2 CERAMIC TILE, COLOR B (ACCENT COLOR)
11. PAINTED GYP. BD.
12. INSULATE EXPOSED PIPES
13. SINGLE BOWL STAINLESS STEEL SINK, RE: PLUMBING DWGS
14. COUNTERTOP REFRIGERATOR; PROVIDE POWER (RE: OWNER)
15. FREEZER 2' W X 2' D X 4' T ; PROVIDE POWER (RE: OWNER)
16. SCHEDULED BASE
17. CABINET FILLER STRIP

FLOOR PLAN – LEGACY CLINIC SCALE: 1/4" = 1'-0" | 2

NEAREST SANITARY MANHOLE RIM ELEVATION = 46.62'
NEW PROPOSED MODULAR BUILDING ELEVATION HAS TO BE AT LEAST 1FT. ABOVE RIM ELEVATION

APPROXIMATE MODULAR BUILDING FINISH FLOOR ELEVATION EQUALS FINISH GRADE OF 46.15' PLUS 2.5' (30") ELEVATED MODULAR = 48.65' FINISH ELEVATION



T1 – T4	CLASSROOM BUILDINGS	1,536 S.F. EACH
T5	BOYS AND GIRLS RESTROOM BUILDING	456 S.F.

FLOOR PLAN – MODULAR BUILDINGS SCALE: 1/8" = 1'-0" | 1

yes prep PUBLIC SCHOOLS

03/08/19

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No.	Description	Date
	ISSUE FOR PERMIT	03/08/19

YES PREP PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

ARCHITECTURAL FLOOR PLAN

Project Number	17018
Date	03/08/19
Drawn By	
Checked By	
Scale	

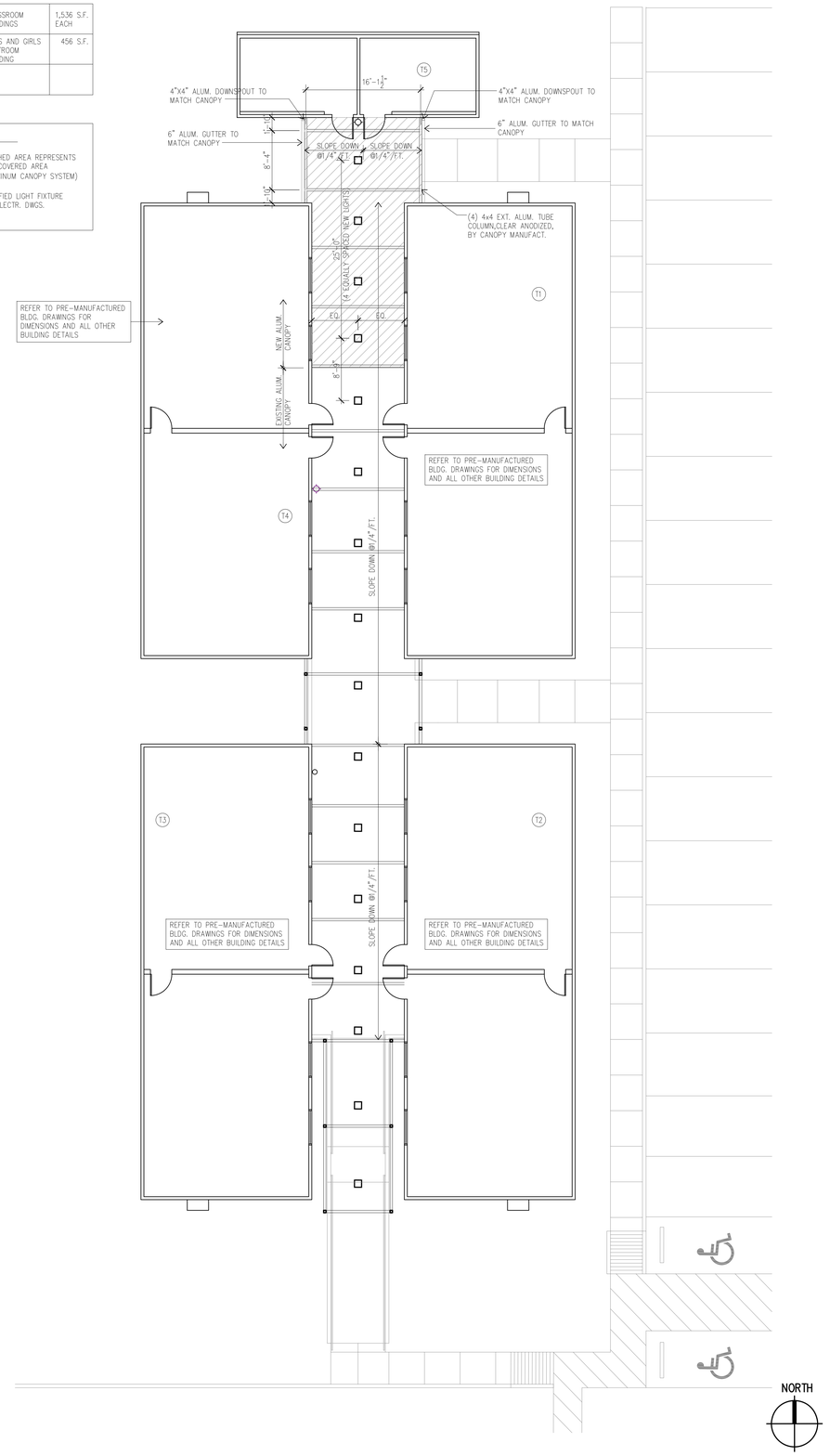
A101

T1 – T4	CLASSROOM BUILDINGS	1,536 S.F. EACH
T5	BOYS AND GIRLS RESTROOM BUILDING	456 S.F.

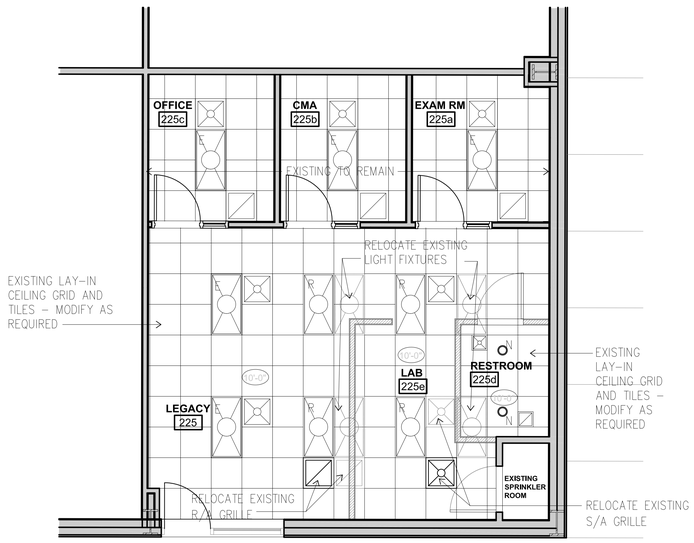
LEGEND

HATCHED AREA REPRESENTS NEW COVERED AREA (ALUMINUM CANOPY SYSTEM)

SPECIFIED LIGHT FIXTURE RE: ELECTR. DWGS.



REFLECTED CEILING PLAN SCALE: 1/8" = 1'-0" 1



E = EXISTING TO REMAIN
R = RELOCATED LIGHT
N = NEW LIGHT

REFLECTED CEILING PLAN – LEGACY CLINIC SCALE: 1/4" = 1'-0" 2

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No.	Description	Date
	ISSUE FOR PERMIT	03/08/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

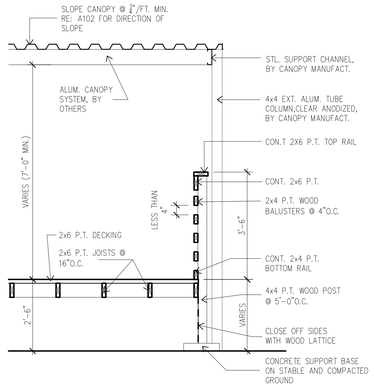
5215 JENSEN ST.
HOUSTON, TX 77026

REFLECTED CEILING PLAN

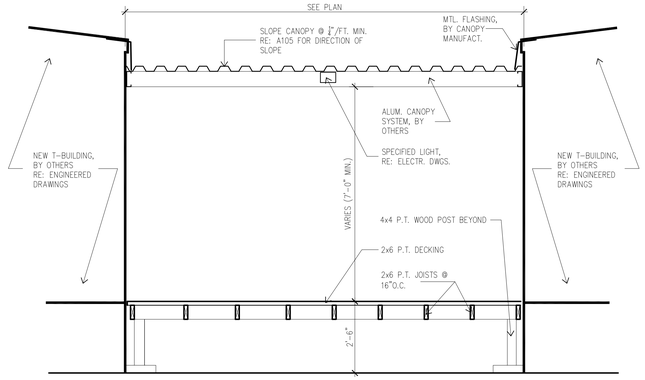
Project Number	17018
Date	03/08/19
Drawn By	
Checked By	

A102

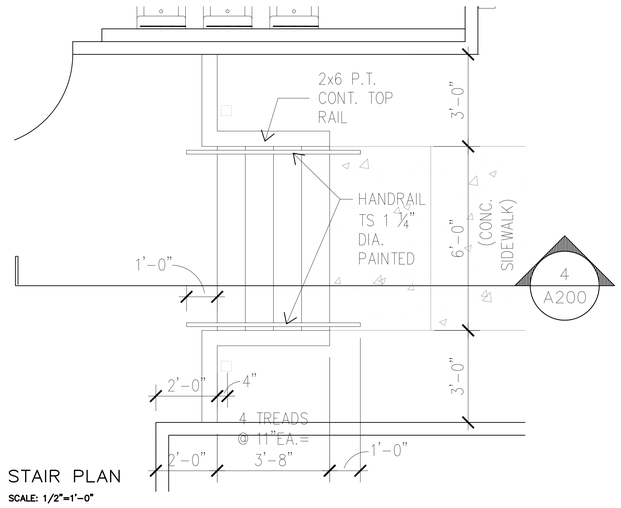
Scale



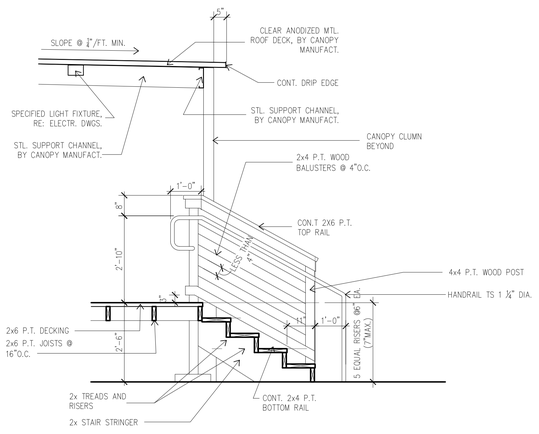
1 RAISED PLATFORM SECTION
SCALE: 1/2"=1'-0"



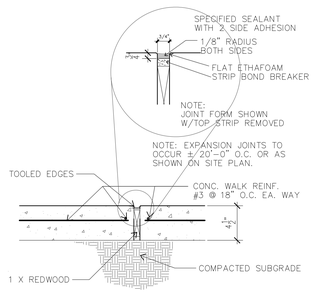
2 RAISED PLATFORM SECTION
SCALE: 1/2"=1'-0"



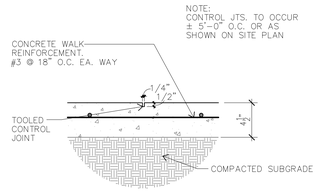
3 STAIR PLAN
SCALE: 1/2"=1'-0"



4 STAIR SECTION
SCALE: 1/2"=1'-0"



5 SIDEWALK EXPANSION JOINT
SCALE: 1 1/2" = 1'-0"



6 SIDEWALK CONTROL JOINT
SCALE: 1 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION CONCERNING FINISH MATERIALS AND COLORS.
2. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT A SAMPLE OF ALL FINISH MATERIALS FOR APPROVAL BEFORE MATERIALS ARE DELIVERED TO JOB
3. PAINT ANY VENTS, GRILLES, FEC, ETC. SAME COLOR AS WALL SURFACE WHICH THEY OCCUR UNLESS OTHERWISE NOTED.
4. TERMINATE ALL ACCENT PAINTS ON INSIDE CORNERS ONLY, U.N.O.
5. ALL FINISH HARDWARE SHALL BE AS A DESIGNATED ON HARDWARE SCHEDULE.
6. PAINT MINIMUM 6'x 6' SAMPLE OF EACH COLOR AT PROJECT SITE FOR ARCHITECT/OWNER APPROVAL PRIOR TO APPLICATION.
7. INTERIOR/SHELF SURFACES OF ANY OPEN UNIT SHALL MATCH COLOR OF THE EXTERIOR LAMINATE.
8. ALL PLASTIC LAMINATE CASEWORK SHALL HAVE 1 COLOR FOR COUNTERTOP AND 1 COLOR FOR CABINETS ,TYP.
9. INTERIOR DOOR FRAMES TO BE ALUMINUM (RACO OR EQUAL) CLEAR ANODIZED FINISH

1. FLOORS

1A. 12"X12" VCT, 2 COLORS, COLORS / PATTERN TO BE SELECTED (OFFICES & LAB)
1B. CERAMIC TILE, 2X2 AMERICAN OLEAN #A33 CHARCOAL W/ #89 SMOKE GRAY GROUT COLOR (RESTROOM)

2. BASE

2A. 4" RESILIENT BASE – ROPPE WALL BASE P100 BLACK (OFFICES & LAB)

3. WALLS

3A. CERAMIC WALL TILE (FIELD) 2X2 AMERICAN OLEAN #A04 LIGHT SMOKE (RESTROOM)
3B. CERAMIC WALL TILE (ACCENT) 2X2 AMERICAN OLEAN, (2) ROWS, 4" HIGH #A33 CHARCOAL (RESTROOM)
3C. GYP. BOARD, PAINT SHERWIN WILLIAMS SW7705, ONE ACCENT WALL IN OFFICES TO BE PAINTED SW6510 (ALL NEW ROOMS)

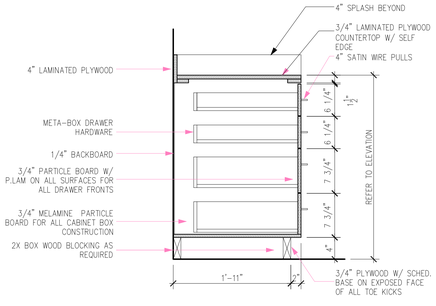
4. CASEWORK/MILLWORK FINIHES

4A. SCIENCE CASEWORK (BODY) –PLASTIC LAMINATE SUADE IRIS (SP409) BY PIONITE
4B. SCIENCE CASEWORK (TOP) – PLASTIC LAMINATE GREY MESH (4877-38) BY WILSONART

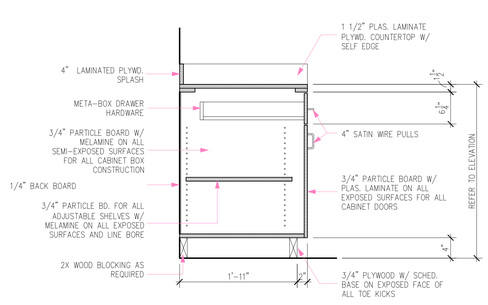
5. MISCELLANEOUS

5D. DOOR – PLASTIC LAMINATE, BY WILSONART

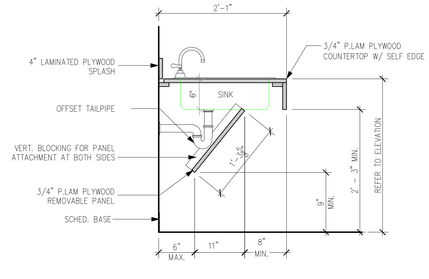
7 INTERIOR FINISHES
SCALE:



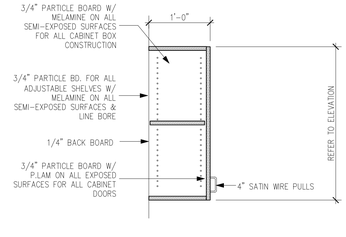
8 BASE CABINET DETAIL (DRAWERS)
SCALE: 1" = 1'-0"



9 BASE CABINET DETAIL
SCALE: 1" = 1'-0"



10 BASE CABINET DETAIL (@ SINK)
SCALE: 1" = 1'-0"



11 UPPER CABINET DETAIL
SCALE: 1" = 1'-0"

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No.	Description	Date
	ISSUE FOR PERMIT	03/08/19

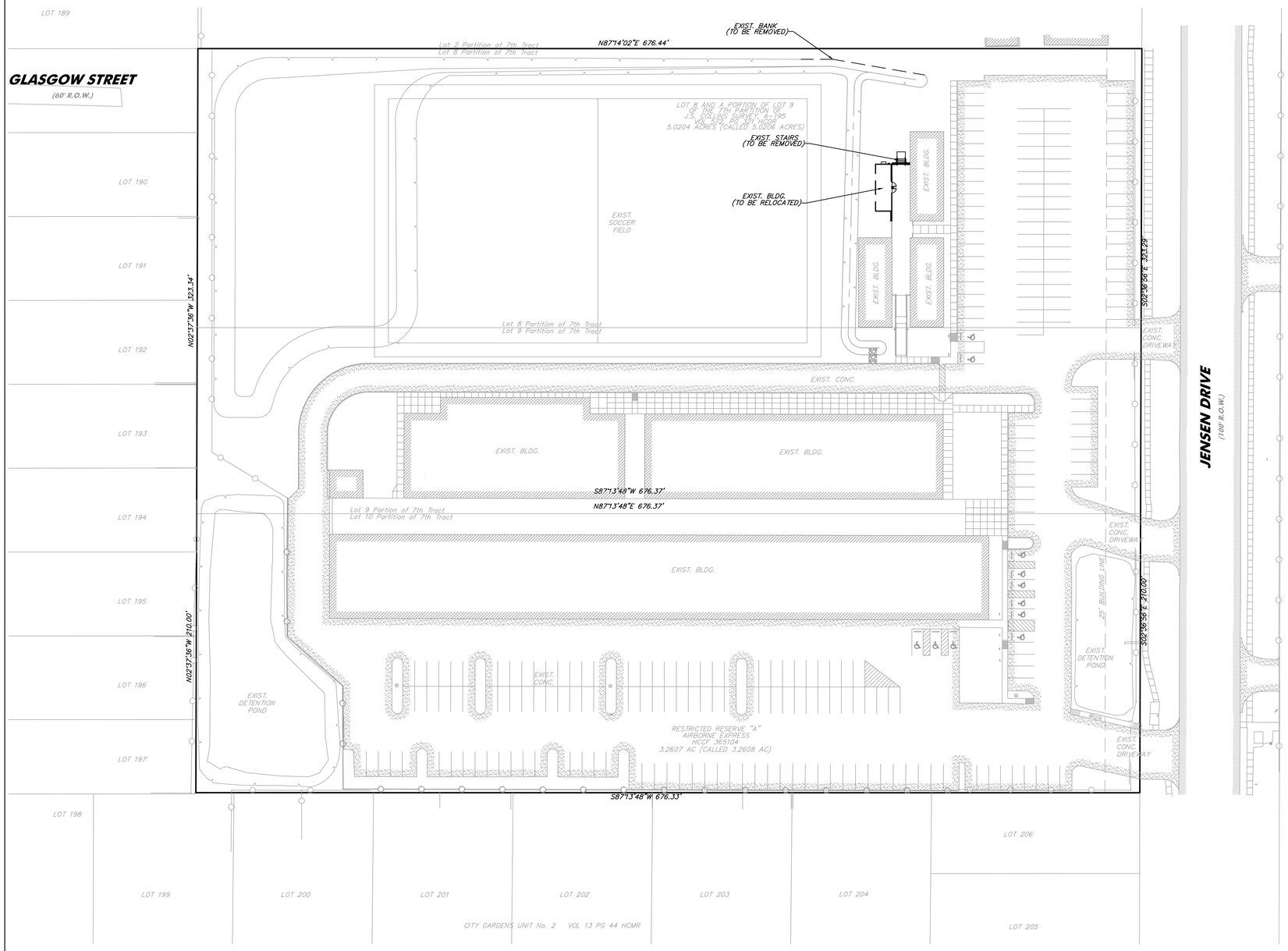
YES PREP PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

STAIR, RAMP + PLATFORM DETAILS

Project Number	17018
Date	03/08/19
Drawn By	
Checked By	
	A200
Scale	



OVERALL DEMO PLAN
SCALE: 1" = 40'-0"

VICINITY MAP
KEYMAP 5 S

BENCHMARK

TROPICAL STORM ALLISON RECOVERY PROJECT MONUMENT NO.050355, ELEVATION=99.03', NAVD88, 2001 ADJUSTMENT.

F.E.M.A. NOTE

BY GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY LIES WITHIN ZONE 'X', AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 48201C0465M DATED JUNE 9, 2014.

PROPOSED LEGEND

	PROP. MANHOLE
	EXIST. MANHOLE
	PROP. STM. SWR. JUNCTION BOX
	EXIST. INLET
A1 / 1.23 ac. / 1.23 ac. / 1.23 cfs.	DRAINAGE AREA / ACREAGE / CUMULATIVE ACREAGE / CUMULATIVE DISCHARGE
FG 73.17	PROP. FINISHED GRADE
TG 73.17	PROP. TOP OF GRATE INLET
TW 73.17	PROP. TOP OF WALK
TP 73.17	PROP. TOP OF PAVEMENT ELEVATION
TC 73.17	PROP. TOP OF CURB ELEVATION
FF 73.17	PROP. FINISHED FLOOR ELEVATION
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FL 73.17	PROP. FLOWLINE ELEVATION
TRW 73.17	PROP. TOP OF RETAINING WALL
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IPB-II	PROP. INLET PROTECTION BARRIER STAGE - II
SCE	PROP. STABILIZED CONSTRUCTION ENTRANCE
CTW	PROP. CONCRETE TRUCK WASHOUT
RF	PROP. ROCK FILTER DAM
FF	PROP. FILTER FABRIC FENCE
GRADE BREAK	PROP. GRADE BREAK
	PROP. BERM
	PROP. STM. SWR. LINE
	EXIST. STM. SWR. LINE
	PROP. WATER LINE
	EXIST. WATER LINE
	PROP. SANITARY SWR. LINE
	EXIST. SANITARY SWR. LINE
	PROP. CENTERLINE DITCH
	PROP. TOP OF BANK
	PROP. DRAINAGE AREA BOUNDARY
	EXIST. CONC. PAVING
	EXIST. SIDEWALK
	PROP. BUILDING
	PROP. 6" 3,500 PSI REIN. CONC. WITH #3 REBAR @ 18" C-C
	PROP. CRUSHED CONCRETE PAVING

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No.	Description	Date
	ISSUE FOR PERMIT	03/06/19

YES PREP
PUBLIC SCHOOLS

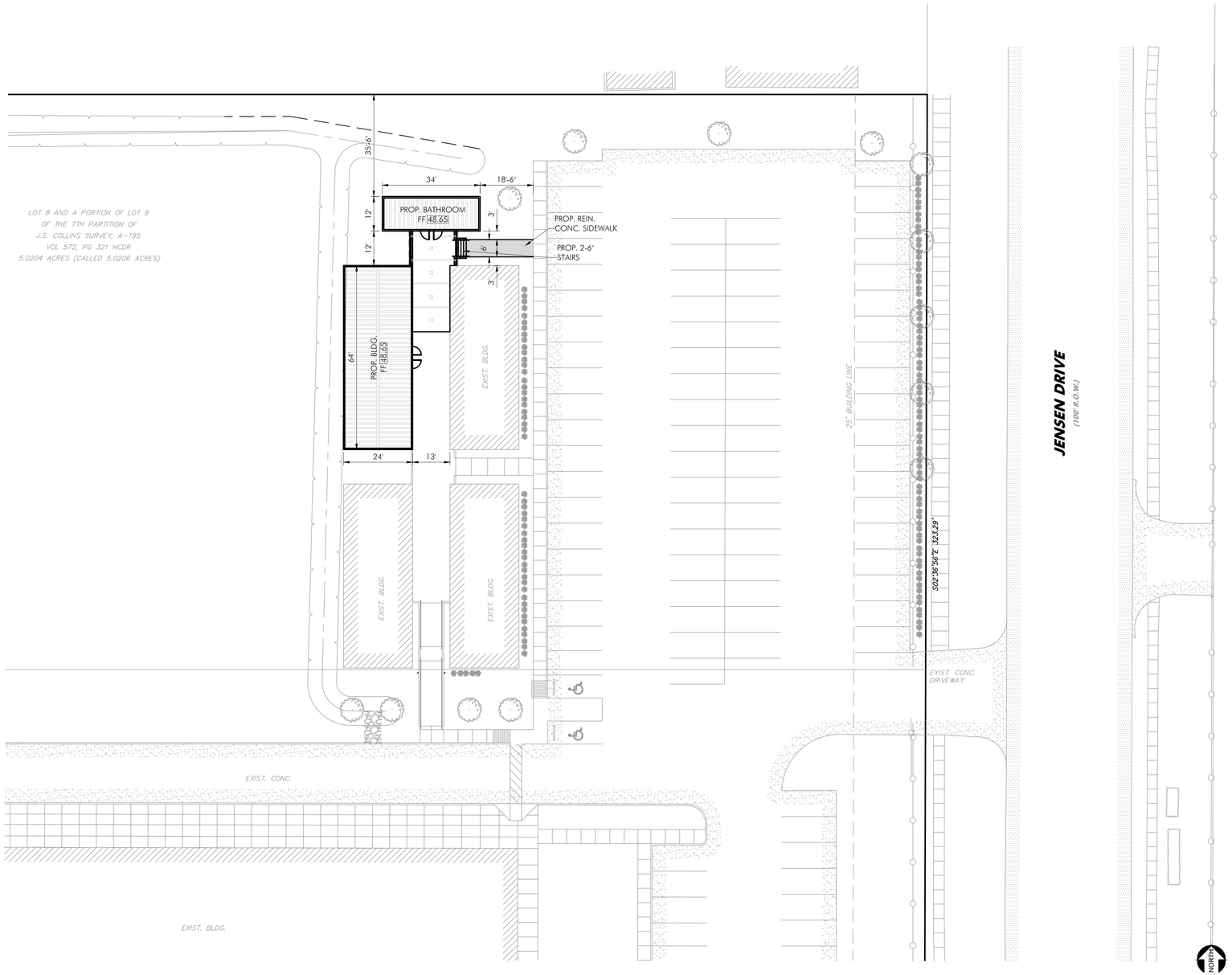
NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

Project Number	
Date	03/06/19
Drawn By	
Checked By	

C-1.0

Scale 1" = 40'



NORTH

SITE PLAN

SCALE: 1" = 20'-0"

NORTH

VICINITY MAP

KEYMAP 5 -S

BENCHMARK

TROPICAL STORM ALLISON RECOVERY PROJECT MONUMENT NO.050355, ELEVATION=99.03', NAVD88, 2001 ADJUSTMENT.

F.E.M.A. NOTE

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PROPOSED LEGEND

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	EXIST. MANHOLE
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	EXIST. INLET
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	PROP. BERM
	PROP. STM. SWR. LINE
	EXIST. STM. SWR. LINE
	PROP. WATER LINE
	EXIST. WATER LINE
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	EXIST. SANITARY SWR. LINE
	PROP. CENTERLINE DITCH
	PROP. TOP OF BANK
	PROP. DRAINAGE AREA BOUNDARY
	EXIST. CONC. PAVING
	EXIST. SIDEWALK
	PROP. BUILDING
	PROP. 6" 3,500 PSI REIN. CONC. WITH #3 REBAR @ 18" C-C
	PROP. CRUSHED CONCRETE PAVING

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No.	Description	Date
	ISSUE FOR PERMIT	03/06/19

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NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

Project Number	
Date	03/06/19
Drawn By	
Checked By	

C-2.0

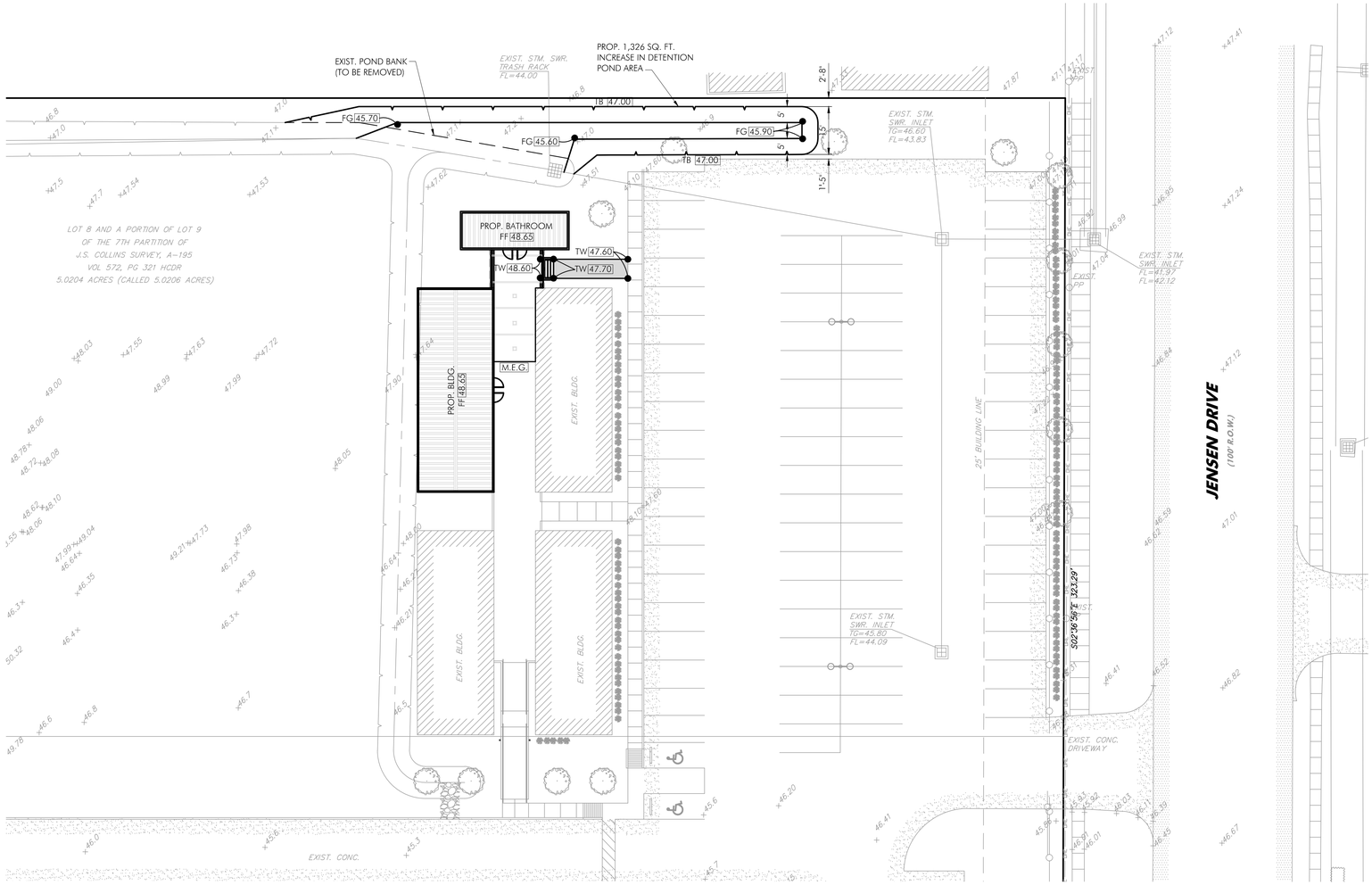
Scale 1" = 20'

DETENTION DATA

TOTAL SITE AREA	= 5.02 AC
PROP. IMPERVIOUS COVER	= 2,587 SQ. FT.
NET INCREASE IN IMPERVIOUS COVER	= 2,179 SQ. FT.
DETENTION STORAGE RATE	= 0.50 AC-FT/AC
DETENTION VOLUME REQUIRED	= 1,090 CU-FT
TOTAL DETENTION VOLUME PROVIDED	= 1,326 CU-FT

DRAINAGE NOTE

EXISTING OUTFALL TO REMAIN. OUTFALL PERMITTED UNDER PREVIOUS DEVELOPMENT.



NORTH

GRADING/DRAINAGE PLAN

SCALE: 1" = 20'-0"

NORTH

VICINITY MAP

KEYMAP 5:-S

BENCHMARK

TROPICAL STORM ALLISON RECOVERY PROJECT MONUMENT NO.050355, ELEVATION=99.03', NAVD88, 2001 ADJUSTMENT.

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	EXIST. WATER LINE
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	PROP. TOP OF BANK
	PROP. DRAINAGE AREA BOUNDARY
	EXIST. CONC. PAVING
	EXIST. SIDEWALK
	PROP. BUILDING
	PROP. 6" 3,500 PSI REIN. CONC. WITH #3 REBAR @ 18" C-C
	PROP. CRUSHED CONCRETE PAVING

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No.	Description	Date
	ISSUE FOR PERMIT	03/06/19

YES PREP PUBLIC SCHOOLS

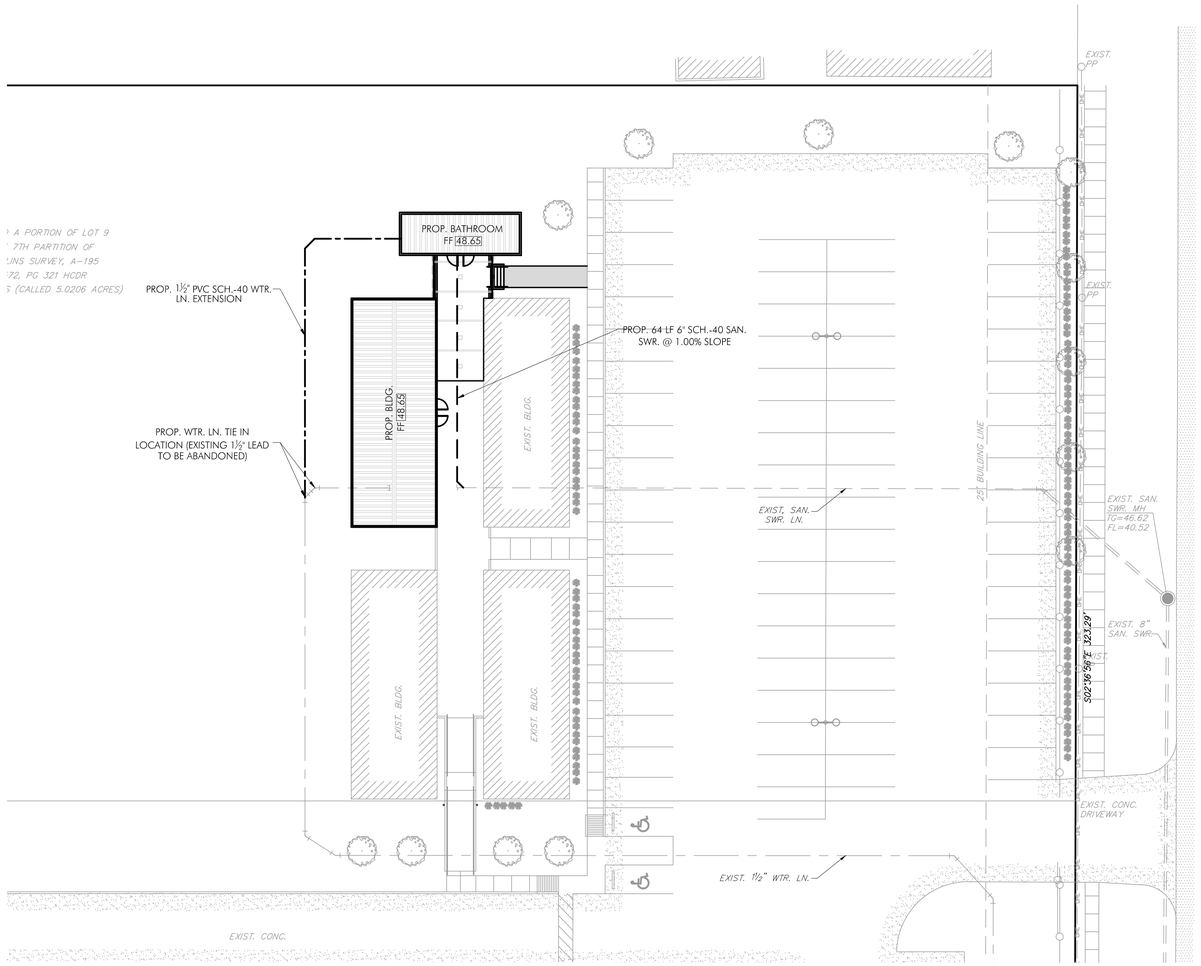
NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

Project Number	
Date	03/06/19
Drawn By	
Checked By	

C-3.0

Scale 1" = 20'



UTILITY PLAN
SCALE: 1" = 20'-0"

VICINITY MAP
KEYMAP □5□-S

BENCHMARK

TROPICAL STORM ALLISON RECOVERY PROJECT MONUMENT NO.050355, ELEVATION=99.03', NAVD88, 2001 ADJUSTMENT.

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	EXIST. MANHOLE
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yes prep
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REGISTRATION NO. F-833

No.	Description	Date
	ISSUE FOR PERMIT	03/06/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

Project Number	
Date	03/06/19
Drawn By	
Checked By	

C-□.0

Scale 1" = 20'

MECHANICAL SYMBOLS AND ABBREVIATIONS

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED HERE ARE USED IN THE DRAWINGS AND MAY NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE DRAWINGS.

MECHANICAL ABBREVIATIONS

AD	ACCESS DOOR	MAX	MAXIMUM
ADJ	ADJUSTABLE	MBH	THOUSANDS OF BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MC	MECHANICAL CONTRACTOR
AL	ALUMINUM	MCA	MINIMUM CIRCUIT AMPACITY
ALT	ALTERNATE	MCC	MOTOR CONTROL CENTER
AP	ACCESS PANEL	MEP	MECHANICAL, ELECTRICAL AND PLUMBING
APD	AIR PRESSURE DROP	MER	MECHANICAL EQUIPMENT ROOM
APPROX	APPROXIMATE	MEZZ	MEZZANINE
ARCH	ARCHITECTURAL	MFR	MANUFACTURER
AVG	AVERAGE	MIN.	MINIMUM
		MISC	MISCELLANEOUS
BAS	BUILDING AUTOMATION SYSTEM		
BOB	BOTTOM OF BEAM	NA	NOT APPLICABLE
BOD	BOTTOM OF DUCT	NC	NORMALLY CLOSED
BOP	BOTTOM OF PIPE	NIC	NOT IN CONTRACT
BTU	BRITISH THERMAL UNITS	NO	NORMALLY OPEN
BTUH	BRITISH THERMAL UNITS PER HOUR	NPS	NOMINAL PIPE SIZE
		NPSH	NET POSITIVE SUCTION HEAD
		NPT	NATIONAL PIPE THREAD
CAV	CONSTANT AIR VOLUME	NR	NEAR
CFH	CUBIC FEET PER HOUR	NTS	NOT TO SCALE
CFM	CUBIC FEET PER MINUTE		
CL	CENTERLINE	OA	OUTSIDE AIR
CLG	CEILING	OC	ON CENTER
COND	CONDENSATE	OED	OPEN END DUCT
CONTR	CONTRACTOR	OLP	OVERLOAD PROTECTION
COP	COEFFICIENT OF PERFORMANCE	OV	OUTLET VELOCITY
CU	COPPER		
		PC	PLUMBING CONTRACTOR
DAP	DUCT ACCESS PANEL	PCF	POUNDS PER CUBIC FOOT
DB	DRY BULB	PD	PRESSURE DROP
DDC	DIRECT DIGITAL CONTROL	PH	PHASE
DEG	DEGREES	PLBG	PLUMBING
DIA	DIAMETER	POC	POINT OF CONNECTION
DIM	DIMENSION	PPH	POUNDS PER HOUR
DN	DOWN	PRV	PRESSURE RELIEF VALVE
DWG	DRAWING	PSF	POUNDS PER SQUARE FOOT
DX	DIRECT EXPANSION	PSI	POUNDS PER SQUARE INCH
		PSIA	POUNDS PER SQUARE INCH ABSOLUTE
EA	EXHAUST AIR	PSIG	POUNDS PER SQUARE INCH GAUGE
EAT	ENTERING AIR TEMPERATURE	PVC	POLYVINYL CHLORIDE
EC	ELECTRICAL CONTRACTOR		
EDR	EQUIVALENT DIRECT RADIATION	RA	RETURN AIR
EFF	EFFICIENCY	REQD	REQUIRED
ELEC	ELECTRICAL	RF	ROOF
ELEV	ELEVATION	RH	RELATIVE HUMIDITY
EM	EMERGENCY	RPM	REVOLUTIONS PER MINUTE
ESP	EXTERNAL STATIC PRESSURE		
ETR	EXISTING TO REMAIN	SA	SUPPLY AIR
EWT	ENTERING WATER TEMPERATURE	SCH	SCHEDULE
EXH	EXHAUST	SHT	SHEET
EXP	EXPANSION	SP	STATIC PRESSURE
EXIST	EXISTING	SPEC	SPECIFICATION
		SQ	SQUARE
F	FAHRENHEIT	S/S	STAINLESS STEEL
FC	FORWARD CURVED	STD	STANDARD
FLA	FULL LOAD AMPS	STRUCT	STRUCTURAL
FLR	FLOOR		
FM	FACTORY MUTUAL	T&P	TEMPERATURE AND PRESSURE
FPD	FLUID PRESSURE DROP	TA	TRANSFER AIR
FPI	FINS PER INCH	TBR	TO BE REMOVED
FPM	FEET PER MINUTE	TC	TEMPERATURE CONTROL
FPS	FEET PER SECOND	TEMP	TEMPERATURE
F&T	FLOAT AND THERMOSTATIC	TOB	TOP OF BEAM
FT	FEET	TOD	TOP OF DUCT
FTG	FOOTING	TOP	TOP OF PIPE
		TOS	TOP OF SLAB
GA	GAUGE	TSP	TOTAL STATIC PRESSURE
GAL	GALLON	T STAT	THERMOSTAT
GALV	GALVANIZED	TYP	TYPICAL
GBD	GRAVITY BACKDRAFT DAMPER	UC	UNDERCUT DOOR 1" (BY GENERAL CONTRACTOR)
GC	GENERAL CONTRACTOR		
GPM	GALLONS PER MINUTE	UNO	UNLESS OTHERWISE NOTED
GPH	GALLONS PER HOUR		
		V	VOLTS
HP	HORSEPOWER	VA	VALVE
		VAV	VARIABLE AIR VOLUME
ID	INSIDE DIAMETER	VEL	VELOCITY
IE	INVERT ELEVATION	VP	VELOCITY PRESSURE
IN	INCHES	VTR	VENT THRU ROOF
LAT	LEAVING AIR TEMPERATURE	W/	WITH
LB/HR	POUNDS PER HOUR	W/O	WITHOUT
LF	LINEAR FEET	WB	WET BULB
LTG	LIGHTING	WC	WATER COLUMN
LWT	LEAVING WATER TEMPERATURE	WG	WATER GAUGE
		X	EXISTING

MECHANICAL EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT/AIR COMPRESSOR	GF	GAS FURNACE
		GV	GRAVITY VENTILATOR
ACC	AIR COOLED CONDENSER		
ACCU	AIR COOLED CONDENSING UNIT	H	HUMIDIFIER
ACU	AIR CONDITIONING UNIT	HC	HEATING COIL
AHU	AIR HANDLING UNIT	HP	HEAT PUMP
AMD	AIR MIXING DEVICE	HRC	HEAT RECOVERY COIL
ARU	AIR ROTATION UNIT	HRD	HEAT RECLAIM DEVICE
AS	AIR SEPARATOR	HX	HEAT EXCHANGER
AT	AIR TERMINAL DEVICE		
		IAH	INTAKE AIR HOOD
B	BOILER	IF	INLINE FAN
BBS	BOILER BLOWDOWN SEPARATOR	IFH	INFRARED HEATER
BC	BOOSTER COIL		
BFS	BOILER FEEDWATER SYSTEM	LP	LOUVERED PENTHOUSE
C	CONVECTOR	MAU	MAKE-UP AIR UNIT
CC	COOLING COIL	MCC	MOTOR CONTROL CENTER
CH	CHILLER		
CP	CONDENSATE PUMP	P	PUMP
CRU	CONDENSATE RETURN UNIT		
CT	COOLING TOWER	RAHU	ROOFTOP AIR HANDLING UNIT
CUH	CABINET UNIT HEATER	RCP	RADIANT CEILING PANEL
		REF	ROOF EXHAUST FAN
DC	DUST COLLECTOR	RF	RETURN FAN
DH	DEHUMIDIFIER	RH	RELIEF HOOD
		RTU	ROOFTOP UNIT
EBB	ELECTRIC BASEBOARD	RV	ROOF VENTILATOR
EF	EXHAUST FAN		
EH	EXHAUST HOOD	SA	SOUND ATTENUATOR
EJ	EXPANSION JOINT	SF	SUPPLY FAN
ET	EXPANSION TANK		
EUH	ELECTRIC UNIT HEATER	T	TANK
		TXV	THERMAL EXPANSION VALVE
F	FILTER		
FCU	FAN COIL UNIT	UH	UNIT HEATER
FD	FLOOR DRAIN	UST	UNDERGROUND STORAGE TANK
FOP	FUEL OIL PUMP	UV	UNIT VENTILATOR
FOT	FUEL OIL TANK		
FTR	FIN TUBE RADIATION	V	VALVE
		VFD	VARIABLE FREQUENCY DRIVE
		VP	VACUUM PUMP

PIPING SYSTEMS AND FITTINGS

Symbol	Description
BBD	BOILER BLOW DOWN
BF	BOILER FEED
BA	BREATHABLE AIR
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
A	COMPRESSED AIR
CDS	CONDENSER WATER SUPPLY
CDR	CONDENSER WATER RETURN
D	DRAIN LINE
FOF	FUEL OIL FILL
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
FOV	FUEL OIL VENT
GCWS	GLYCOL CHILLED WATER SUPPLY
GCWR	GLYCOL CHILLED WATER RETURN
HPWS	HEAT PUMP WATER SUPPLY
HPWR	HEAT PUMP WATER RETURN
HPS	HIGH PRESSURE STEAM
HPC	HIGH PRESSURE CONDENSATE
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
H	HUMIDIFICATION
LP	LIQUEFIED PETROLEUM GAS
LPS	LOW PRESSURE STEAM (10 PSIG)
LPC	LOW PRESSURE CONDENSATE
MU	MAKE-UP WATER
MPS	MEDIUM PRESSURE STEAM
MPC	MEDIUM PRESSURE CONDENSATE
G	NATURAL GAS
N2	NITROGEN
V	VENT LINE
PC	PUMPED CONDENSATE
RHG	REFRIGERANT HOT GAS
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
RV	REFRIGERANT VENT
VAC	VACUUM (AIR)

FLANGE
UNION
ANCHOR
PIPE GUIDE
ECCENTRIC REDUCER
CONCENTRIC REDUCER
LINE CONTINUATION BREAK
PIPELINE STRAINER
ELBOW DOWN
ELBOW UP
TEE DOWN
TEE UP
PIPE CAP
VALVE IN VERTICAL

NOTE:
(X) PRIOR TO SYSTEM TYPE DENOTES EXISTING PIPING
(i.e. XHWS - EXISTING HOT WATER SUPPLY)

(XX) = SYSTEM PRESSURE IN PSIG
i.e. —— (5 PSIG G) ——

PIPE VALVES AND SPECIALTIES

ANGLE VALVE
BALANCING VALVE (CIRCUIT SETTER) — C.S.
BALL VALVE
BUTTERFLY VALVE
BUTTERFLY VALVE WITH ACTUATOR
CHECK VALVE (ARROW INDICATES FLOW DIRECTION)
DIAPHRAGM VALVE
DRAIN VALVE WITH CAPPED OUTLET
FLOAT OPERATED VALVE
GATE VALVE
GLOBE VALVE
PLUG VALVE
PRESSURE REDUCING VALVE
PRESSURE RELIEF VALVE
SHUTOFF VALVE (SEE SPECIFICATION FOR TYPE)
SOLENOID VALVE — S
THERMAL EXPANSION VALVE
TRIPLE DUTY VALVE
2-WAY CONTROL VALVE
3-WAY CONTROL VALVE

AUTOMATIC AIR VENT — AV
MANUAL AIR VENT — HMV
BALL JOINT
EXPANSION JOINT — EJ
FLEXIBLE CONNECTION
FLOW SWITCH — FS
FLOW METER — FM
PETE'S PLUG
PRESSURE GAUGE
PRESSURE SWITCH — PS
STEAM TRAP — XX
(INDICATE TYPE:
T - THERMOSTATIC TRAP
F&T - FLOAT AND THERMOSTATIC TRAP
IB - INVERTED BUCKET TRAP)
THERMOMETER
DIRECTION OF FLOW
DIRECTION OF PITCH RISE (R) OR DROP (D) — R

DUCTWORK FITTINGS

SINGLE LINE DUCTWORK — DOUBLE LINE DUCTWORK

RECTANGULAR/ROUND BRANCH TAKE OFF (SA, RA, AND EA)
— 1/□D BUT NOT LESS 6" — D
— 1/□W BUT NOT NOT LESS 6"
TEE (FOR LOW PRESSURE SUPPLY AIR DUCTWORK ONLY) — □5°, W
15° MAX. FOR DIVERGING TRANSITION, 25° MAX. FOR CONVERGING TRANSITION - ECCENTRIC
15° MAX. FOR DIVERGING TRANSITION, 25° MAX. FOR CONVERGING TRANSITION - CONCENTRIC
DUCT WITH FLOW DIRECTION ARROW
LINE CONTINUATION BREAK (RECTANGULAR, ROUND)
SUPPLY AIR (SA) OR OUTDOOR AIR (OA) DUCT UP
SUPPLY AIR (SA) OR OUTDOOR AIR (OA) DUCT DOWN
RETURN AIR (RA), RELIEF AIR OR TRANSFER AIR (TA) DUCT UP
RETURN AIR (RA), RELIEF AIR OR TRANSFER AIR (TA) DUCT DOWN
EXHAUST AIR (EA) DUCT UP
EXHAUST AIR (EA) DUCT DOWN
DUCT RISE/DROP W/ 90° ELBOWS (SUPPLY RECTANGULAR DUCT SHOWN)
EITHER RADIUS OR SQUARE ELBOW (REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS) — W, R=1.5W, RADIUS ELBOW
SQUARE ELBOW WITH TURNING VANES
DUCT RISE (R) OR DROP (D) W/ 30° ELBOWS (RECTANGULAR DUCTS) — D
DUCT CROSS OVER
THIS DUCT RUNS UNDERNEATH

DIFFUSER, GRILLE, AND REGISTER NOTATION

DUCT SIZE IN INCHES (NET INSIDE DIMENSIONS) FIRST FIGURE: SIDE SHOWN SECOND FIGURE: SIDE NOT SHOWN — 12X12

A1 — DIFFUSER/GRILLE MARK
000 — CFM
10"Ø — NECK SIZE
(TYP.2) — TYPICAL OF QUANTITY

12"Ø INDICATES ROUND DUCTWORK
12X12ϕ INDICATES OVAL ROUND DUCTWORK

SQUARE/RECTANGULAR SUPPLY DIFFUSER, GRILLE OR REGISTER
ROUND DIFFUSER
RETURN REGISTER OR GRILLE (HORIZONTAL MOUNT)
EXHAUST REGISTER OR GRILLE (HORIZONTAL MOUNT)
SIDEWALL REGISTER OR GRILLE WITH DAMPER (DUCT MOUNT)
SUPPLY REGISTER OR GRILLE (VERTICAL MOUNT)
EXHAUST OR RETURN REGISTER OR GRILLE (VERTICAL MOUNT)

DAMPERS AND CONTROLS

MANUAL VOLUME DAMPER
FIRE DAMPER
SMOKE DAMPER
COMBINATION FIRE/ SMOKE DAMPER
BACKDRAFT DAMPER — B
MOTORIZED DAMPER — M

(T) SPACE THERMOSTAT
(H) SPACE HUMIDISTAT
(T)N NIGHT CYCLE CONTROL THERMOSTAT
[T] TEMPERATURE SENSOR
[H] HUMIDITY SENSOR
[P] PRESSURE SENSOR
(SD) DUCT SMOKE DETECTOR
(ST) STARTER
(S) SWITCH

DUCTWORK SPECIALTIES

DUCT REHEAT COIL
TEST HOLE
ACCESS DOOR — AD
NEW TO EXISTING DUCT CONNECTION — NEW, EXISTING
REMOVE EXISTING DUCTWORK
FLEXIBLE DUCT
POINT OF CHANGE IN DUCT CONSTRUCTION BY PRESSURE CLASS — 3 2
LINED DUCTWORK

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER AND SHALL COMPLY WITH ALL ADOPTED LOCAL, STATE, AND NATIONAL CODES.
2. DO NOT SCALE THE DRAWINGS.
3. DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR TO INSTALL PIPE AND DUCTWORK IN A MANNER ACCORDING TO GOOD PRACTICE. ANY MAJOR DEVIATIONS REQUIRED FROM THE DESIGN DRAWINGS SHALL BE VERIFIED WITH THE ENGINEER/ARCHITECT.
4. FINAL ELECTRICAL CONNECTIONS AT OR ABOVE 120V SHALL BE MADE BY THE ELECTRICAL CONTRACTOR.
5. INSTALL BALANCING DAMPERS AND SPLITTER DAMPERS AS SHOWN AND AS REQUIRED FOR PROPER BALANCING OF THE MECHANICAL SYSTEM. PROVIDE TO THE ENGINEER/OWNER A BALANCING REPORT SHOWING RESULTS OF BALANCE TESTING. ALL BALANCE TESTING SHALL MEET THE CURRENT NEBB STANDARDS.
6. DO NOT LOCATE FCU'S, VAV'S, OR FPT'S ABOVE LIGHTS OR CONFERENCE ROOMS.
7. REFER TO STRUCTURAL DRAWINGS AND OTHER DISCIPLINES FOR COORDINATING DUCT ROUTING IN CEILING PLENUM SPACE.
8. PROVIDE A SET OF RECORD DRAWINGS OF THE ACTUAL INSTALLATION. RECORD DRAWINGS SHALL INCLUDE AS A MINIMUM, THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF DUCT & PIPE DISTRIBUTION SYSTEM INCLUDING SIZES AND THE TERMINAL AIR DESIGN FLOW RATES.
9. AVOID ROUTING OF PIPING OR DUCTWORK ABOVE IT, ELECTRICAL OR FIRE EQUIPMENT ROOMS.
10. PROVIDE APPROPRIATELY RATED FIRE STOPPING FOR PENETRATIONS THROUGH FIRE-RATED WALLS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED STRUCTURES.
11. COORDINATE THERMOSTAT, SENSOR AND SWITCH LOCATIONS WITH ARCHITECT/OWNER PRIOR TO INSTALLATION.
12. PROVIDE DUCT TRANSITIONS FROM EQUIPMENT CONNECTIONS TO DUCT SIZES SHOWN.
13. FLEXIBLE DUCT SHALL BE INSULATED AND SHALL BE THE SAME SIZE OF THE NECK OF THE AIR DEVICE. FLEXIBLE DUCTWORK SHALL NOT EXCEED 8'-0" IN LENGTH, PROVIDE WRAPPED RIGID ROUND DUCTWORK FOR TAKE-OFFS IN EXCESS OF 8'-0".
14. MAINTAIN A MINIMUM 10'-0" SEPARATION FROM OUTSIDE AIR INTAKES TO EXHAUST TERMINATIONS AND VENTS.
15. MAINTAIN A MINIMUM 5'-0" SEPARATION FROM EXHAUST TERMINATIONS TO OPERABLE WINDOWS.
16. ALL UNLINED DUCTWORK VISIBLE THOUGH THE AIR DEVICE SHALL BE PAINTED FLAT BLACK.
17. CEILING TILES USED TO ACCESS FAN COIL UNITS TO BE LABELED.
18. CONDENSATE DRAIN LINES SHALL BE COMPLETELY INSTALLED FOR ALL EQUIPMENT AND COMPLY WITH MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS. ALL CONDENSATE LINES TO BE INSULATED.

DVO PROJECT — 191034

yes prep PUBLIC SCHOOLS

2007 Ea architects

STATE OF TEXAS — JASON W. DAWSON — 108125 — LICENSED — PROFESSIONAL ENGINEER

DVO — 825 TOWN & COUNTRY LANE STE 1150 HOUSTON, TX 77024 (281) 293 - 7500 WWW.DVOENG.COM REGISTRATION NO. F-8334

No.	Description	Date
	ISSUE FOR PRICING / PERMIT	03/01/19

YES PREP PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST. HOUSTON, TX 77026

MECHANICAL SYMBOLS + ABBREVIATIONS

Project Number	17018
Date	03/01/19
Drawn By	BB
Checked By	WD

M000

Scale — As Indicated

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1.1 15010 MECHANICAL GENERAL

A. Re□erence: All portions o□ General Conditions apply to Mechanical and Plumbin□ work.

B. Guarantees: Pro□ide written one year □uarantee □or all systems and e□uipment. Compressors shall be □uaranteed □or □i□e years.

C. Codes: Comply with National, State and City codes and other applicable standards. All portions o□ the International Ener□y Conser□ation Code □IECC□ and Current Local AHJ Commercial Ener□y Conser□ation Codes must be complied with.

D. Super□ision: Pro□ide super□isor in □ield □or each phase o□ work.

E. Coordination: Coordinate all work with other trades. Pro□ide mechanical and plumbin□ e□uipment with electrical characteristics compatible with that shown on the Electrical Drawin□s and described in the Electrical Di□ision o□ the speci□ications. The en□ineer reser□es the ri□ht to mo□e ser□ices as re□uired to coordinate the work, at no cost to the owner.

F. The drawin□s are schematic in nature, and should not be scaled, but show the □arious components o□ the systems appro□imately to scale and attempt to indicate how they are to be inte□rated with other parts o□ the buildin□. Determine e□act locations by job measurements, by checkin□ the re□uirements o□ other trades, and by re□iewin□ all Contract Documents. The drawin□s indicate □eneral routin□ o□ the □arious parts o□ the systems, but do not indicate all □ittin□s, o□sets, and run outs which are re□uired. The Contract shall include all □ittin□s, o□sets, and run outs re□uired to □it the system into spaces allotted to them.

G. Shop Drawin□s and Submittal Data: PAPERLESS SUBMITTAL ONLY TO ENGINEER. All Shop Drawin□s and Submittal Data shall be an electronic □ile □ormat only. PDF □ormat is acceptable. All e□uipment and materials shall be submitted, includin□ ductwork and e□uipment chan□es, as re□uired. Submitted items that de□iate □rom the drawin□s and speci□ications shall be hi□hli□hted in yellow □or easy distinction. Mark all items and show that they comply with the IECC. The En□ineer shall issue a letter statin□ the action taken on the submittal. The letter shall be copied and attached to the submittal, by the contractor, and distributed as re□uired.

H. Record Data: Obtain, at Contractor's e□pense, a set o□ prints and keep these on the job site durin□ construction. Durin□ construction, mark on these prints any chan□es that are made, notin□ particularly locations o□ those items that will need to be □or ser□icin□. Con□ert record data to an Electronic Format □PDF□ and submit to the Architect. Furnish one set o□ shop drawin□s and maintenance manuals in brochure □orm. Record Brochures shall be □i□en to the owner at completion o□ the work.

I. Permits, Fees: Secure and pay □or all □ees and char□es □or the work. Furnish certi□icates o□ acceptance at completion o□ the job □rom City.

J. Substitutions: No substitutions shall be made without prior appro□al □rom the Architect and En□ineer.

K. Cuttin□ and Patchin□: Cuttin□ to be by this section, with patchin□ and □urrin□ by General Contractor. Patchin□ re□uired a□ter completion o□ work shall be paid □or by Contractor.

L. Clean Up: Clean and touch-up paint all e□uipment at completion o□ work. Protect all e□uipment □rom dama□e durin□ construction. Pro□ide name plates on all e□uipment.

M. Tests: Tests all pipin□ systems per local code. Sterili□e all new water pipin□ per Health Department re□uirements.

N. Test all e□uipment and pro□e per□ormance results to Architect. Modi□y all dri□es, balance all air as shown on the drawin□s. A□ter Owner has occupied and is usin□ the buildin□, make additional inspections o□ the system. Correct any Owner's obser□ed temperature imbalances. Check correct operation o□ e□uipment and □eri□y by letter to the Architect, on each trip. List in the letter corrections made. At the opposite season o□ the startup inspect and □eri□y correct operation o□ all systems. Tests all control systems. Test re□ri□erant pipin□ per manu□acture's recommendations. Furnish complete copy o□ all test data to Architect. Instruct owner □or one day in operation o□ all systems. Filters shall be clean when systems are accepted by the owner. Testin□ Re□ulations must meet local City Re□uirements.

O. E□ca□atin□ and Back□illin□: E□ca□ate to pro□ide minimum 2 □eet co□er o□er all pipin□ and conduit. Back □ill to ori□inal compaction. Saw-cut e□istin□ □inishes and patch to matchin□ ori□inal conditions.

P. Noise and Vibration: All e□uipment shall operate with minimum o□ noise and □ibration. Contractors shall recti□y any objectionable conditions.

Q. Temporary Ser□ices: Furnish temporary utility as re□uired □or new construction.

R. E□uipment Connections: Pro□ide all martial and labor □or connectin□ o□ all e□uipment □urnished in other sections or by owner. Field □eri□y all e□uipment □or dimensions and rou□hin□-in. Furnish all □al□es, drain pipin□, traps, etc., as re□uired to install the e□uipment.

S. Floor Drains: Final location will be determined by e□uipment layout and location must be □ield appro□ed. Pro□ide trap primers to all □loor drains.

T. E□amination o□ Site: The contractor is responsible □or □isitin□ the job site and con□irmin□ the location o□ e□istin□ conditions be□ore biddin□. I□ e□istin□ conditions re□uire modi□ication due to ele□ation, obstruction, si□e, etc., the contractor will ad□ise in writin□ be□ore be□innin□ construction.

END OF SECTION 15010

1.1 15020 MECHANICAL SPECIFICATIONS

A. Pro□ide all labor and materials □or complete mechanical systems. Systems must comply with IECC.

B. Plates: Pro□ide chrome plated plates o□er all pipes throu□h walls, □loors, and ceilin□s. Pro□ide □al□ani□ed pipe slee□es □or all lines throu□h walls, □loors, and roo□s. Slee□es in outside walls and roo□ shall be water ti□ht. Slee□es throu□h walls abo□e ceilin□s shall be air ti□ht.

C. Pipin□ Material:

1. Pipe handlin□ materials to be □al□ani□ed. Separate copper pipe with insulatin□ tape. Pro□ide ma□imum headroom and clearances □or access.
2. Re□ri□erant pipin□: Type "L" copper, with solder-type □ittin□s.
3. Chilled and heatin□ water pipes: Schedule □0 black steel.
□. Drain lines shall be pro□ided □or each air handlin□ unit. Drains pipin□ shall be Type "L" copper, or schedule □0 □al□ani□ed steel.
5. Joints □or copper pipe shall be sil□er solder. Use malleable □ittin□s □or screwed joints □or steel pipes 2.5" and smaller. Use welded joints □or 3" and lar□er pipe.

D. Duct Insulation:

1. E□ternal: All ductwork shall be insulated and □apor sealed with R-8. E□ternal insulation shall comply with IECC, and be a minimum o□ 3" thick, with a □apor barrier applied o□er joints. Insulate outer cores o□ di□uses □e□ternally□. Insulation shall be applied per manu□acture's recommendations.
2. Internal: Internal duct insulation shall be a minimum o□ 2" thick with R-8, and comply with IECC. Insulation shall be applied per manu□acture's recommendations, with insulatin□ pins speed washers 12" on centers on tops and sides o□ the duct.
3. Ductwork si□es shown on drawin□s are inside dimension.
□. All supply di□user backpans to be insulated with R-8 insulation.

E. Ductwork: All ductwork materials shall be □al□ani□ed steel. Gau□es, bracin□, and supports shall be per SMACNA Manual. Plenums shall be 18-□au□e. Pro□ide air□oil type turnin□ □anes at all chan□es in direction. E□tractors shall ha□e operators. Paint □lat black behind □rilles. Cross-break all ducts 12 inches and wider. Duct dimensions shown on drawin□s are clear inside dimensions. Submit shop drawin□s and chan□es to plan layouts and to pro□ide ade□uate clearances. Fle□ible ductwork connections shall be pro□ided □or all □an unit connections. Vent□las □abric shall be □" wide. Support ducts a ma□imum o□ 6 □eet on centers with 1" □26 □au□e han□ers. Secure supports with a sheetmetal screw on bottom, and 12" centers on sides. Dampers shall ha□e □elt ed□es and be 16 □au□e. Pro□ide lockin□ □uadrants □or dampers. Pro□ide concealed re□ulators □or e□tractors on branch ducts, on takeo□s to the ceilin□ di□uses. Fle□ible ducts shall be pre insulated type, and a ma□imum o□ 8 □eet lon□. U.L. □ire dampers with access doors shall be pro□ided as shown on the plans or re□uired by code. Install dampers and access doors per U.L. re□uirements. Units abo□e ceilin□s shall ha□e au□iliary drain pans. Auxiliary drain pans shall be a minimum 4" high and made out of sheetmetal. Pans shall ha□e au□iliary drain and a □an □loat switch.

F. Motors: Shall be an NEMA Standards hi□h e□iciency motor, operatin□ non o□erloaded.

G. Motor Controls and Disconnects: Furnished by Electrical Contractor. This Contractor shall □urnish disconnects, thermal o□erloads, starters, relays and e□tra contacts □or interlockin□.

H. Electrical: Contractors shall coordinate electrical characteristics with Electrical Contractor. Be□ore orderin□ any e□uipment, submit a list o□ ma□imum o□erload circuits □or all e□uipment to the Electrical Contractor and En□ineer. This Contractor shall □urnish all control instruments and wirin□ dia□rams showin□ terminal identi□ication numbers.

I. Air De□ices: Krue□er, Carnes, Titus, or Metalaire. All de□ices shall be aluminum. Ceilin□ mounted outlets shall be o□-white, other outlets shall be primed coated suitable □or paintin□ on the job. Operatin□ dampers abo□e non accessible ceilin□ shall ha□e access doors or youn□ re□ulators. See schedules on plans.

J. Fans: Roo□ mounted, ceilin□ mounted, wall mounted, □ent sets or inline type as shown on the drawin□s. Pro□ide □actory curbs □or all roo□ mounted □ans or hoods. Pro□ide aluminum dischar□e □rilles as re□uired. Fans shall be Greenheck, Loren Cook, Penn, or Acme.

K. Demolition: Pro□ide materials and labor re□uired □or the remo□al o□ mechanical e□uipment as noted on the drawin□s. Remo□e all de□ices related to the demolition o□ partitions and ceilin□s o□ the e□istin□ buildin□.

END OF SECTION 15020

yes prep
PUBLIC SCHOOLS

2007 Ea architects

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REGISTRATION NO. F-8334

No.	Description	Date
	ISSUE FOR PRICING / PERMIT	03/01/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

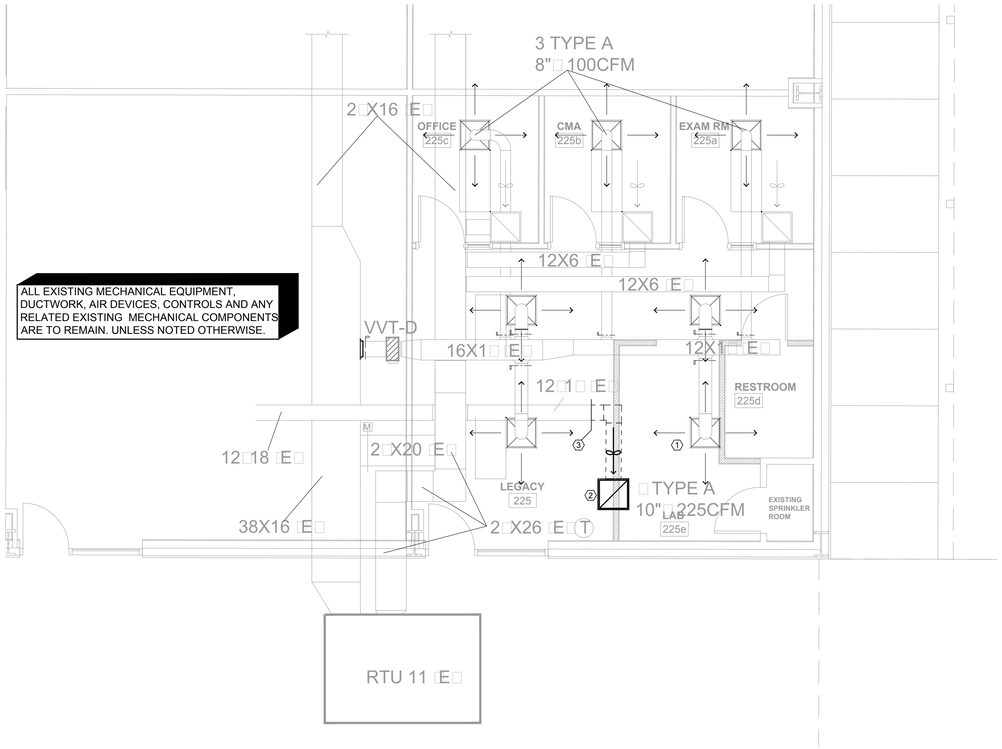
5215 JENSEN ST.
HOUSTON, TX 77026

MECHANICAL SPECIFICATIONS

Project Number	17018
Date	03/01/19
Drawn By	XX
Checked By	WD

M001

Scale: As Indicated



ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AIR DEVICES, CONTROLS AND ANY RELATED EXISTING MECHANICAL COMPONENTS ARE TO REMAIN. UNLESS NOTED OTHERWISE.

KEYED NOTES:

1. EXISTING SUPPLY DIFFUSER TO BE RELOCATED. SEE RENOVATION PLAN THIS SHEET.
2. EXISTING RETURN AIR GRILLE TO BE RELOCATED. SEE RENOVATION PLAN THIS SHEET.
3. DEMO EXISTING 12 1 RETURN AIR DUCT FROM RETURN AIR GRILLE INLET TO THE LOCATION AS SHOWN.

01 MECHANICAL DEMOLITION FLOOR PLAN

SCALE: 1/8"=1'-0"

KEYED NOTES:

1. ROUTE 6" EXHAUST UP OVER ADJACENT CANOPY COVERING WALKWAY AND OVER TO NEW WALL CAP.
2. PROVIDE EXHAUST WALL CAP SIMILAR TO GREENHECK WC-6 ABOVE EXISTING WALKWAY CANOPY. COORDINATE ELEVATION, LOCATION, AND COLOR WITH ARCHITECT.
3. CONNECT NEW 6" FLEX DUCT TO EXISTING 12 1 SUPPLY DUCT WITH SPIN-IN DUCT FITTING. PROVIDE MANUAL BALANCE DAMPER AT FITTING AND BALANCE TO 60CFM.
4. RELOCATE EXISTING DIFFUSER TO NEW LOCATION SHOWN ON PLAN. STRETCH EXISTING FLEX DUCT AND REBALANCE TO 225CFM.
5. CONNECT NEW 12 1 RETURN DUCT TO EXISTING 12 1 DUCT AS SHOWN.

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	RADIATION DAMPER	OBD DAMPER	MANUFACTURER: TITUS OR EQUAL
A	CEILING DIFF	NO	NO	OMNI - AA, SQUARE PLAQUE LAY-IN, 12 12

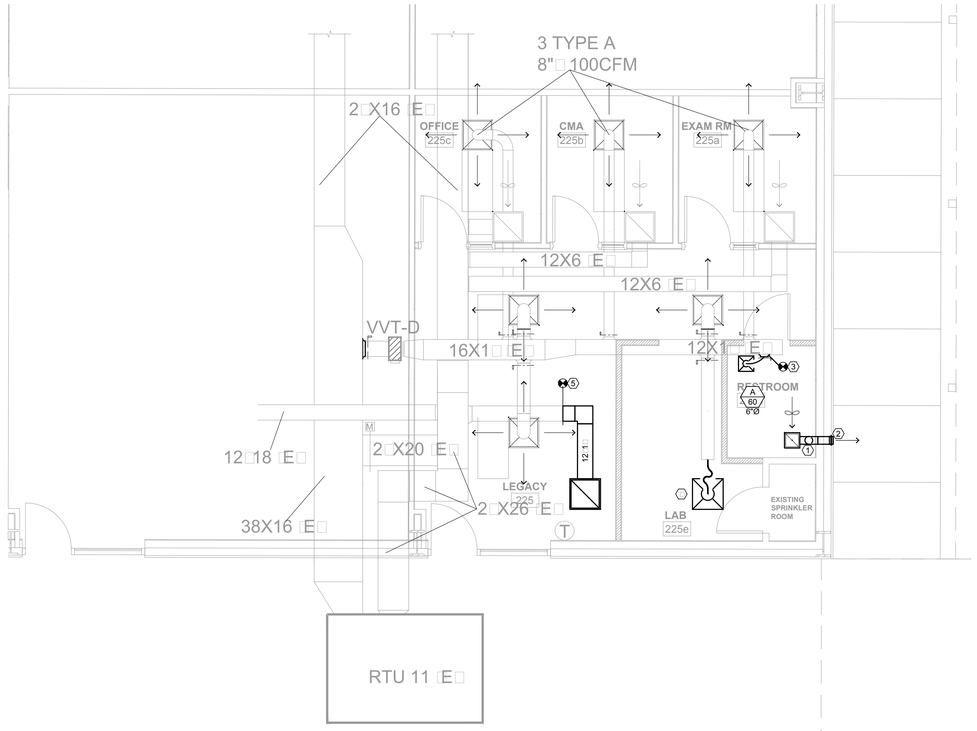
1. VERIFY ALL CEILING TYPES WITH ARCHITECTURAL DRAWINGS.
2. ALL AIR DEVICES SHALL BE ALUMINUM, UNLESS NOTED.
3. SUPPLY RADIATION DAMPERS FOR DEVICES PENETRATING RATED CEILINGS.
4. VERIFY FINAL COLOR / FINISH WITH ARCHITECT FOR ALL DIFFUSERS AND GRILLES.

A1 / 000 / 10"Ø — DIFFUSER/GRILLE MARK, CFM, NECK SIZE
TYP.2 — TYPICAL OF QUANTITY

FAN SCHEDULE - CEILING MOUNTED

MARK	SERVICE	CFM	STATIC PRESS	FAN RPM	DRIVE TYPE	VOLT PHASE	WATTS	MANUFACTURER
EF-1	EXHAUST	75	0.30	887	DIRECT	120 / 1	12	GREENHECK SP-A50-90-VG

1. ALL FANS TO HAVE DISCONNECT SWITCHES.
2. PROVIDE SPEED CONTROLLERS ON ALL DIRECT DRIVE FANS. LOCATE WITH FAN.
3. PROVIDE ALL CEILING MOUNTED EXHAUST FANS WITH BACKDRAFT DAMPER.



02 MECHANICAL FLOOR PLAN

SCALE: 1/8"=1'-0"

yes prep PUBLIC SCHOOLS

2007 Ea architects

STATE OF TEXAS JASON A. WILSON 98175 LICENSED PROFESSIONAL ENGINEER

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MECHANICAL FLOOR PLAN

Project Number	17018
Date	03/01/19
Drawn By	XX
Checked By	WD

M101

Scale: As Indicated

DVO PROJECT – 191034

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ELECTRICAL SYMBOLS AND ABBREVIATIONS

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED HERE ARE NECESSARILY USED IN THE DRAWINGS AND MAY NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED WITHIN THE DRAWINGS.

ELECTRICAL ABBREVIATIONS

A	AMPERE
AC	ABOVE COUNTER
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPS INTERRUPTING CAPACITY
AL	ALUMINUM
AS	AMP SWITCH
AT	AMP TRIP
ARCH	ARCHITECT
ATS	AUTOMATIC TRANSFER SWITCH
A/V	AUDIO VISUAL
B	PEDESTAL MOUNTED ON BENCH TOP
BF	BELOW FLOOR
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
C	CONDUIT
CAT	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING MOUNTED
CR	CORROSION RESISTANT
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CU	COPPER
CL	CENTERLINE
D	DEDICATED DEVICE
DC	DIRECT CURRENT
DISC	DISCONNECT
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
EMT	ELECTRIC METALLIC TUBING
EWC	ELECTRIC WATER COOLER
EX	EXISTING
FLA	FULL LOAD AMPS
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFPE	GROUND FAULT PROTECTION EQUIPMENT
GND	GROUND
GRC	GALVANIZED RIGID CONDUIT
HH	HANDHOLE
HOA	HAND/OFF/AUTOMATIC
HP	HORSEPOWER
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
H□	HERTZ □cycle□PER SECOND
IG	ISOLATED GROUND
JB	JUNCTION BOX
KVA	KILOVOLT AMPERE
KVAR	KILOVOLT AMPERE REACTIVE
KW	KILOWATT LS LIMIT SWITCH
LTG	LIGHTING
LV	LOW VOLTAGE
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	OVER CURRENT
OL	OVERLOAD
P	POLE
PB	PULL BOX
PH	PHASE
PNL	PANELBOARD
PR	PAIR
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE CONDUIT
R	RELAY
REC	RECESSED
SC	SHORT CIRCUIT
SN	SOLID NEUTRAL
SP	SPARE
SPD	SURGE PROTECTIVE DEVICE
SS	STAINLESS STEEL
SSRV	SOLID STATE REDUCED VOLTAGE
ST	SHUNT TRIP
STP	SHIELDED TWISTED PAIR
SUSP	SUSPENDED
SW	SWITCH
SWBD	SWITCHBOARD
TC	TELEPHONE CABINET
TCI	TELECOMMUNICATIONS CABLING INSTALLER
TEL/DATA	TELEPHONE/DATA
TEL	TELEPHONE
TR	TAMPER RESISTANT
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UG	UNDERGROUND
UTP	UNSHIELDED TWISTED PAIR
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
Y	WYE

LIGHTING AND CONTROLS

LIGHTING FIXTURES

- SURFACE MOUNTED
- SURFACE MOUNTED DOWNLIGHT
- SURFACE MOUNTED WALL WASHER
- RECESS MOUNTED
- RECESS MOUNTED DOWNLIGHT
- RECESS MOUNTED WALL WASHER
- VOLUMETRIC RECESS MOUNTED
- STRIP
- SCONCE
- EXTERIOR SCONCE
- LOW BAY
- HIGH BAY
- LINEAR WALL MOUNT
- BOLLARD
- POLE MOUNTED □UP TO FOUR HEADS□
- SUSPENDED, PENDENT, OR CABLE HUNG
- CEILING MOUNTED EXIT SIGN
- WALL MOUNTED EXIT SIGN
- CEILING MOUNTED EMERGENCY LIGHTING UNIT
- WALL MOUNTED EMERGENCY LIGHTING UNIT

SHADING INDICATES EMERGENCY LIGHT
XX = TYPE REFERENCE FIXTURE SCHEDULE
□= SWITCH LEG

LIGHTING CONTROLS

$ WALL MOUNTED SWITCH
SUBSCRIPTS:
2 = DOUBLE POLE
3 = 3-WAY
□ = □-WAY
D = DIMMER
K = KEY-OPERATED
P = PILOT LIGHT
T = THERMAL OVERLOAD
V = VACANCY SENSOR
LV = LOW VOLTAGE
O = OCCUPANCY SENSOR

- DAYLIGHT/OCCUPANCY SENSOR
- EXTENDED RANGE SENSOR
- STANDARD RANGE SENSOR
- LINE VOLTAGE OCCUPANCY SENSOR
- OCCUPANCY SENSOR
- PE PHOTOCELL

TELECOMMUNICATIONS

- WALL MOUNTED DATA
- WALL MOUNTED TELEPHONE
- WALL MOUNTED TELEPHONE/DATA
- CEILING MOUNTED DATA
- CEILING MOUNTED TELEPHONE
- CEILING MOUNTED TELEPHONE/DATA
- TV RECESSED TV BOX

2015 COMMERCIAL ENERGY COMPLIANCE COMMISSIONING REQUIREMENTS:

CONTRACTOR SHALL HIRE A THIRD PARTY CERTIFIED COMMISSIONING AGENT TO PERFORM THE COMMISSIONING AND PROVIDE THE PRELIMINARY REPORT OF COMMISSIONING TO THE LOCAL CITY.

A. THE CERTIFICATIONS ACCEPTABLE INCLUDE:
- CBCP - CERTIFIED BUILDING COMMISSIONING PROFESSIONAL- ASSOCIATION OF ENERGY ENGINEERS
- CCP - CERTIFIED COMMISSIONING PROFESSIONAL - BUILDING COMMISSIONING ASSOCIATION
- CPMP - CERTIFIED PROCESS MANAGEMENT PROFESSIONAL - ASHRAE
- CXA - CERTIFIED COMMISSIONING AUTHORITY - AABC COMMISSIONING GROUP
- BSC - BUILDING SYSTEM COMMISSIONING CERTIFICATION - NATIONAL ENVIRONMENTAL BALANCING BUREAU

B. FUNCTIONAL TESTING FOR AUTOMATIC LIGHTING CONTROLS IS REQUIRED PER C□08.3. THE CONSTRUCTION DOCUMENTS MUST SPECIFY THAT THE BUILDING OWNER WILL BE GIVEN, WITHIN 90 DAYS FROM THE DATE OF RECEIPT OF CERTIFICATE OF OCCUPANCY, WRITTEN CERTIFICATION THAT THE LIGHTING CONTROLS MEET DOCUMENTED PERFORMANCE CRITERIA.

C. OCCUPANCY SENSORS: FOR PROJECTS WHERE FEWER THAN EIGHT OCCUPANCY SENSORS ARE INSTALLED, EACH MUST BE TESTED. IF MORE THAN SEVEN ARE INSTALLED, AT LEAST 10□ □AND AT LEAST ONE□WILL BE TESTED FOR EACH UNIQUE COMBINATION OF SENSOR TYPE AND SPACE GEOMETRY. IF 30□ OR MORE FAIL THE ACCEPTANCE CRITERIA, ALL REMAINING IDENTICAL COMBINATIONS MUST BE TESTED. VERIFY:
- PROPER LOCATION AND AIMING.
- CORRECTION OPERATION WHERE THE SENSORS INCLUDE STATUS INDICATORS.
- THE LIGHTS TURN ON TO THE PERMITTED LEVEL WHEN THE SPACE BECOMES OCCUPIED □IF AUTO-ON□
- THE LIGHTS TURN ON ONLY WHEN MANUALLY ACTIVATED □IF MANUAL-ON□
- FALSE-ON TRIGGERING DOES NOT OCCUR BY MOVEMENT IN ADJACENT AREAS OR FROM HVAC OPERATION.

D. TIME-SWITCH CONTROLS VERIFY:
- THE TIME-SWITCH CONTROL IS PROGRAMMED WITH ACCURATE WEEKDAY, WEEKEND AND HOLIDAY SCHEDULES.
- THE TIME SWITCH INCLUDES THE CORRECT TIME AND DATE.
- ANY BATTERY BACKUP IS INSTALLED AND ENERGIZED.
- THE OVERRIDE IS SET TO NO LONGER THAN TWO HOURS.
- SIMULATING AN OCCUPIED CONDITION, THAT ALL LIGHTS CAN BE TURNED ON/OFF BY THEIR LOCAL MANUAL SWITCH, AND THAT THE SWITCH ONLY OPERATES THE LOCAL LIGHTING.
- SIMULATING AN UNOCCUPIED CONDITION, THAT THE CONTROLLED LIGHTING TURNS OFF, AND THAT THE MANUAL OVERRIDE ALLOWS ONLY LOCAL LIGHTING TO TURN ON AND REMAIN ON UNTIL THE NEXT TIME SWEEP OCCURS WITHIN TWO HOURS.

ADDITIONAL TESTING MAY BE REQUIRED BY THE AHJ. THE OWNER MUST BE GIVEN DOCUMENTATION INDICATING THE PROGRAMMING □INCLUDING WEEKDAY, WEEKEND AND HOLIDAY SCHEDULES□AND ALL OTHER SETTINGS.

POWER AND COMMUNICATIONS

RECEPTACLES

DUPLEX
- STANDARD
- ABOVE COUNTER (AC)
- EMERGENCY
- GFI
- WEATHERPROOF GFI (WP)
- GFI AC (AC)
- RECESSED
- TAMPER RESISTANT

SIMPLEX
- STANDARD
- ABOVE COUNTER (AC)
- EMERGENCY
- GFI
- GFI WEATHERPROOF (WP)
- GFI ABOVE COUNTER (AC)
- RECESSED
- TAMPER RESISTANT

QUADRUPLEX
- STANDARD
- ABOVE COUNTER (AC)
- EMERGENCY RECEPTACLE
- GFI
- WEATHERPROOF GFI (WP)
- GFI ABOVE COUNTER (AC)
- RECESSED
- TAMPER RESISTANT

MISCELLANIOUS
- SPECIAL
- ISOLATED GROUND
- HALF SWITCHED
- USB
- HOSPITAL GRADE
- TR HOSPITAL GRADE
- DUPLEX CEILING
- QUADRUPLEX CEILING
- DUPLEX FLOOR
- QUADRUPLEX FLOOR
- PEDESTAL RECEPTACLE
- CLOCK RECEPTACLE

COMBINATION FLOOR BOX DUPLEX
- TELEPHONE/DATA
- DATA
- TELEPHONE

COMBINATION FLOOR BOX QUADRUPLEX
- TELEPHONE/DATA
- DATA
- TELEPHONE

OTHER
- J JUNCTION BOX
- WALL MOUNTED JUNCTION BOX
- T THERMOSTAT
- POKE THROUGH
- DAMPER CONNECTION
- M MOTOR CONNECTION
- MOTOR RATED SWITCH (ST)
- CONDUIT UP
- CONDUIT DOWN
- CONDUIT STUBOUT
- SEAL OFF
- POWER POLE

SENSORS AND SWITCHES
- FS FLOW
- HOA HAND OFF AUTO SELECTION
- LS FLOAT OR LEVEL
- ZS LIMIT OR POSITION
- PS PRESSURE
- SV SOLENOID VALVE
- TS TEMPERATURE

EQUIPMENT

- T TRANSFORMER
- PANEL
- M METER
- G GENERATOR
- CIRCUIT BREAKER
- SHUNT TRIP CIRCUIT BREAKER (ST)
- P HH PRIMARY DISTRIBUTION
- 2 HH SECONDARY DISTRIBUTION
- C HH COMMUNICATIONS
- PB PULLBOX
- MGB MAIN GROUNDING BRIDGE
- GROUNDING BRIDGE
- F DISCONNECT SWITCH FUSED
- N DISCONNECT SWITCH NONFUSED
- MOTOR STARTER
- MOTOR STARTER INTEGRAL DISCONNECT
- MULTI-SPEED MOTOR STARTER (MS)
- SSRV MOTOR STARTER (SSRV)
- VARIABLE FREQUENCY DRIVE STARTER (VF)
- MOTOR CONTROL CENTER
- F STARTER FUSED DISCONNECT
- N STARTER NONFUSED DISCONNECT
- X MECHANICAL EQIPMENT

GENERAL NOTES

1. THE ELECTRICAL CONTRACTOR SHALL REPLACE AND/OR REPAIR TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER, ANY ITEMS THAT ARE DAMAGED OR REMOVED BY THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
2. THESE DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE OFF OF THE ELECTRICAL DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.
3. REFER TO THE ARCHITECTURAL PLANS, ELEVATIONS, AND DIAGRAMS FOR LOCATIONS OF FLOOR AND WALL ELECTRICAL DEVICES. ELECTRICAL DEVICES SHALL BE MOUNTED LONG AXIS VERTICAL AT THE FOLLOWING HEIGHTS AFF TO CENTER OF DEVICE: SWITCHES □□8", RECEPTACLES □18", VOICE/DATA JACKS □18", UNLESS NOTED OTHERWISE WITHIN THE DRAWINGS.

□. ON NEW FLOOR PLANS: ALL ITEMS SHOWN IN LIGHT LINE WEIGHT ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE. ALL ITEMS SHOWN IN HEAVY LINE WEIGHT ARE NEW OR RELOCATED AS NOTED.

5. ALL 120V BRANCH CIRCUITS SHALL BE 3-WIRE □PHASE, NEUTRAL, GROUND□ PHASE, NEUTRAL, AND GROUND CONDUCTORS SHALL BE NO. 12 AWG UNLESS NOTED OTHERWISE. ALL BRANCH CIRCUITS AND FEEDERS SHALL HAVE EQUIPMENT GROUNDING CONDUCTORS INSTALLED IN THE RACEWAY. USE OF THE CONDUIT BODY AS A GROUNDING METHOD IS PROHIBITED.
6. ALL MOUNTING OF ELECTRICAL DEVICES □LUMINAIRES, TRANSFORMERS, PANELS, OUTLETS, CONDUIT RUNS, ETC.□SHALL COMPLY WITH STATE AND LOCAL SEISMIC REQUIREMENTS. ALL LUMINAIRES SHALL BE SUPPORTED INDEPENDENTLY OF THE CEILING SUPPORT HANGERS IN COMPLIANCE WITH IBC AND NEC REQUIREMENTS.
7. ADA COMPLIANCE: ELECTRICAL DEVICES PROJECTING FROM THE WALLS WITH THEIR LEADING EDGES BETWEEN 27" AND 80" AFF SHALL PROTRUDE NO MORE THAN □" INTO WALKWAYS OR CORRIDORS.
8. BACK TO BACK MOUNTING OF RECEPTACLES OR COMMUNICATION OUTLETS IS NOT PERMITTED. THE MINIMUM SEPARATION BETWEEN DEVICES SHALL BE 6" O.C. IN COMMON WALLS AND 2□" O.C. IN SOUND-RATED WALLS.
9. GFCI DEVICES SHALL BE PROVIDED AS NOTED AND SHALL COMPLY WITH NEC AND LOCAL REQUIREMENTS. NO FEED-THRU GFCI PROTECTION SHALL BE PERMITTED FOR DOWNSTREAM DEVICES. GFCI DUPLEX RECEPTACLES SHALL BE UL 9□3 2006 "LOCK-OUT" ACTION OR "NOTIFICATION" COMPLIANT.
10. ALL RECEPTACLES IN BREAK ROOMS SHALL BE GFCI PROTECTED. PROVIDE REMOTE BLANK FACE GFCI DEVICE IN AN ACCESSIBLE LOCATION AS REQUIRED FOR INACCESSIBLE RECEPTACLES. VERIFY REMOTE BLANK FACE GFCI DEVICE LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
11. ALL ELECTRICAL CABINETS, PANELS, DISCONNECTS, TRANSFORMERS, CONTROLS, RECEPTACLES, J-BOXES, ETC., SHALL BE MARKED, TAGGED AND IDENTIFIED. PROVIDE ADHESIVE FILM LABEL, MACHINE PRINTED, IN BLACK, BY THERMAL TRANSFER OR EQUIVALENT PROCESS, WITH MINIMUM LETTER HEIGHT OF 3/8". THE LABEL SHALL IDENTIFY THE ORIGINATING PANEL AND CIRCUIT NUMBER IN THE FOLLOWING FORMAT: PANEL-CKT. NOTE FEEDER SOURCE WHERE APPLICABLE. REFERENCE SPECIFICATIONS FOR ADDITIONAL LABELING REQUIREMENTS. WHERE THE PROJECT SPECIFICATIONS INDICATE MORE STRINGENT LABELING REQUIREMENTS, THOSE REQUIREMENTS SHALL TAKE PRECEDENCE.
12. THE CONTRACTOR SHALL PROVIDE TYPED, UPDATED PANEL DIRECTORIES FOR ALL PANELS AFFECTED BY THIS SCOPE OF WORK.
13. UPON COMPLETION OF THE PROJECT, ALL CHANGES SHALL BE DOCUMENTED, AND REDLINED. AS-BUILT DRAWINGS SHALL BE TURNED OVER TO THE OWNER BY THE CONTRACTOR.

1□. TRANSFORMERS INDICATED TO BE SUSPENDED FROM THE STRUCTURE SHALL BE SUPPORTED BY A UNISTRUT FRAME THAT IS ATTACHED TO THE STRUCTURE.

15. □" CONCRETE HOUSEKEEPING PADS SHALL BE FURNISHED FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT.
16. COORDINATE THE LOCATIONS AND CONTROLS OF ALL APPLICABLE FIRE/SMOKE DAMPERS WITH THE MECHANICAL CONTRACTOR, PRIOR TO CONSTRUCTION.
17. PROVIDE □1□3/□"C WITH BUSHING AND PULL STRING FROM EACH TELEPHONE, DATA, COMMUNICATION, AND THERMOSTAT OUTLET TO ABOVE THE ACCESSIBLE CEILING, UNLESS NOTED OTHERWISE.
18. COORDINATE THE INSTALLATION OF COMMUNICATIONS CABLING, ROUTING, MOUNTING BOXES, AND TERMINATIONS WITH THE OWNER OR IT MANAGER, PRIOR TO CONSTRUCTION.
19. ALL LOW VOLTAGE AND SYSTEMS CABLING LOCATED ABOVE THE ACCESSIBLE CEILING SHALL BE PROPERLY RATED FOR THE APPLICATION. WITHOUT EXCEPTION, ALL CABLING SHALL BE HUNG FROM BRIDLE-TYPE RINGS OR PLACED IN CABLE TRAYS BY THE ELECTRICAL CONTRACTOR. IN EXPOSED CEILING AREAS, ALL CABLING SHALL BE RUN IN CONDUIT TO THE NEAREST ACCESSIBLE CEILING LOCATION.
20. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID TO VERIFY EXISTING CONDITIONS. BY SUBMITTING A BID THE CONTRACTOR ACKNOWLEDGES THAT HE HAS VISITED THE SITE AND THE BID IS ADEQUATE TO PERFORM ALL OF THE WORK NECESSARY TO MAKE THE SYSTEMS COMPLETE AND OPERATIONAL. IF THE CONDITIONS AT THE SITE ARE NOT SUCH THAT THE WORK CAN BE INSTALLED AS SHOWN, CONTRACTOR'S BID SHALL INCLUDE COST TO COVER NECESSARY ADJUSTMENTS AND ADDITIONS, BASED UPON SITE CONDITIONS, TO MAKE THE SYSTEMS COMPLETE AND OPERATIONAL. CONTRACTOR SHALL CONTACT ARCHITECT/ENGINEER WITH ANY FIELD DISCREPANCIES.
21. ON DEMOLITION PLANS: ALL ITEMS SHOWN IN LIGHT LINE WEIGHT ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE. ALL ITEMS SHOWN IN HEAVY LINE WEIGHT SHALL BE REMOVED, UNLESS NOTED OTHERWISE.
22. IN REMODEL AREAS WHERE OCCUPANCY SENSING DEVICES ARE SPECIFIED AND ARE REPLACING EXISTING MANUAL SNAP SWITCH CONTROL OF THE LIGHTING, PROVIDE A NEUTRAL CONDUCTOR FROM THE LIGHTING CIRCUIT BEING CONTROLLED TO THE OCCUPANCY SENSING DEVICE □OR SWITCH/POWER PACK, WHERE LOW VOLTAGE SENSORS ARE SPECIFIED□ FOR BIDDING PURPOSES, ASSUME THAT THE EXISTING SNAP SWITCHES ARE WIRED WITHOUT A NEUTRAL CONDUCTOR, AND A NEW NEUTRAL CONDUCTOR WILL BE REQUIRED.
23. THE NEW WIRING REQUIRED IN REMODELED AREAS SHALL BE FISHED THROUGH EXISTING WALLS OR CONCEALED IN NEW WALLS OR ABOVE CEILINGS. SURFACE MOUNTED CONDUIT SHALL NOT BE USED IN ANY FINISHED AREAS. CONTRACTOR SHALL NOT ROUTE ANY CONDUIT WITHIN STRUCTURAL OR TOPPING SLABS OF FLOORS UNLESS NOTED TO DO SO.

2□. ITEMS THAT ARE SHOWN TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING ALL ASSOCIATED CONDUIT, WIRE, AND HANGERS BACK TO THE POINT OF ORIGIN OR THE NEAREST EXISTING ITEM THAT IS REMAINING, UNLESS NOTED OTHERWISE. WHERE EXISTING DEVICES, SWITCHES, MOTOR CONNECTIONS, ETC. ARE TO BE REMOVED FROM WALLS WHICH ARE REMAINING, WALLS SHALL BE PATCHED TO MATCH ORIGINAL FINISH AFTER CONDUCTORS HAVE BEEN REMOVED. BLANK COVERPLATES OVER EXISTING BOXES ARE NOT ACCEPTABLE. IF EXISTING CONDUITS ARE ROUTED IN CONCRETE FLOOR SLABS, WALLS OR CEILINGS, THEY SHALL BE CUT BACK TO WITHIN CONCRETE AND FILLED WITH GROUT TO ACHIEVE A SMOOTH AND EVEN FINISH FLUSH WITH CONCRETE SURFACE AFTER CONDUCTORS HAVE BEEN REMOVED.

25. MAINTAIN CIRCUIT CONTINUITY FOR EXISTING ITEMS THAT ARE REMAINING OR BEING RELOCATED.

DVO PROJECT – 191034

yes prep PUBLIC SCHOOLS

2007 Ea architects

STATE OF TEXAS JASON W. DAWSON 108125 LICENSED PROFESSIONAL ENGINEER

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No.	Description	Date
	ISSUE FOR PRICING / PERMIT	03/01/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

ELECTRICAL SYMBOLS + ABBREVIATIONS

Project Number	17018
Date	03/01/19
Drawn By	KL
Checked By	JF

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Scale: As Indicated

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DIVISION 16 - ELECTRICAL SPECIFICATIONS

Section 16050 - Common Work Results for Electrical

1. Provide all labor, materials, equipment and incidentals for completion of all electrical systems described herein. All electrical equipment and material shall be installed in accordance with requirements, governing authorities, and in a neat and workman like manner by skilled and competent electricians in conformance with the standard practices of the electrical industry. All electrical systems shall be complete and operational to the benefit of the owner.
   A. Good workmanship and appearance are considered equal to proper operation.
   B. The contractor shall provide all foreseeable electrical equipment and accessories necessary, whether specifically stated or not, to make the required electrical systems complete and operational.
2. The electrical contractor shall comply with the requirements of the general conditions, supplemental general conditions of the project specifications, any base building specifications and building criteria, and all contract specifications and documents.
3. Definitions and standards:
   A. "Provide" means contractor is responsible for the furnishing and installation of.
   B. "Exposed" means where it can be seen after the building is completed such as in equipment rooms, unfinished areas, accessible tunnels, etc. where conduit/equipment is accessible.
   C. "Concealed" means where it cannot be seen after the building is completed such as in spaces as chases, trenches, above ceilings, in walls and buried where conduit/wire is inaccessible when building is completed.
   D. Standards for materials: all materials shall be new except as otherwise stated, and shall conform with the current applicable industry standards, NEMA standards and Underwriters Laboratories standards.
4. Coordinate and order the progress of electrical work to conform to the owner's schedule and the progress of the work of the other trades.
5. Apply for and pay for all permits, fees, licenses and inspections for this division of work.
6. Provide temporary lighting and power as required.
7. Visit the project site before submitting a bid as no extras will be allowed for lack of knowledge of obvious existing conditions.
8. Drawings are diagrammatic in nature. Take all dimensions from architectural drawings, certified equipment drawings and from the structure itself before fabricating any work.
9. Comply with the latest federal, state and local codes requirements, and ordinances, with the National Electrical Code of the National Fire Protection Association, and with requirements of the power and telephone companies furnishing services to the project. The following is a brief list of applicable codes:
   A. NFPA No. 70 - National Electrical Code, latest edition
   B. NFPA No. 72 - Fire Alarm, latest edition
   C. NFPA No. 101 - Life Safety Code, latest edition
   D. IBC & UBC, latest edition
   E. Local building codes, latest edition
10. All equipment and materials shall be new unless noted otherwise and acceptable for installation only if labeled or listed as defined in NFPA 70, Article 100, by UL or by a recognized testing laboratory where standards have been established and acceptable to the authority having jurisdiction. Labeled or Listed equipment shall be installed in accordance with any instructions or labeling provided with the equipment.
11. Provide all core drilling, channeling, cutting, patching, sleeves, etc. as required for installation of electrical equipment. Seal holes, providing fireproof sealant where necessary, and refinish all repair work to original condition where damaged by electrical work.
   A. Coordinate core drill locations with structural prior to starting work.
   B. Coordinate underground site utilities with appropriate utility company prior to starting work.
12. Make provisions for safe delivery and secure storage of all materials.
13. Warranties: Provide a written warranty to the owner covering the entire electrical work excluding incandescent and fluorescent lamps, to be free from defective materials, equipment and workmanship for a period of one year after date of acceptance. All equipment or materials that fail during the warranty period shall be replaced or repaired by the electrical contractor in a timely fashion at no cost to the owner.
14. Manufacturers: Subject to compliance with requirements, provide products by the manufacturer(s) specified on the drawings or provide products from manufacturers with similar construction and performance characteristics.
15. Product Alterations and Substitutions: Should the contractor wish to have products considered other than those specified, contractor must submit those items as required in Division 1. Contractor will be required to submit the total savings (anticipated savings) to the owner.
16. Shop Drawings: Submit shop drawings as required in Division 1 for all materials and equipment. Provide manufacturer's standard catalog pages and data sheets including detailed information on product construction, physical dimensions, ratings, listings, power consumption, finishes, mounting requirements, service conditions, and installed accessories; include model number nomenclature clearly marked with all proposed features. Provide separate product data information for each product indicated using Engineer's naming convention. If the shop drawings deviate from the contract documents, advise the engineer of the deviations via written format, accompanying the shop drawings. Include the reason for the deviation(s). Coordinate all required changes with the other trades affected. If the changes are occasioned by the contractor, the contractor shall pay any costs involved.
   Shop drawings shall include but are not limited to the following:
   A. Product data for lighting.
   B. Product data for lighting control devices.
   C. Product data for panelboards.
   D. Product data, calculations and drawings for fire alarm system.
17. Project Record Drawings: At completion of work, deliver completed project record documents to architect/engineer. Project record documents shall be in CAD and shall include any special systems (fire alarm, etc.) and "project record" shop drawings.
18. Operation and Maintenance Manuals: Submit number as required by Division 1, typed and hard bound to architect for approval prior to scheduling any system demonstration for the owner and fifteen (15) days prior to final observation. Books shall be arranged in sequence to match the specification sections.

16051 - Seismic

1. All seismic requirements and design shall be through delegated design. Contractor shall be required to provide all necessary equipment seismic calculations, anchors, supports, etc. as required by A.H.J. for compliance with seismic requirements.

Section 16060 - Grounding and Bonding

1. Conduit systems, supports, cabinets, equipment, transformers, fixtures, the grounded circuit conductor, etc. shall be properly grounded in accordance with the current issue of the National Electrical Code. Provide all bonding jumpers and wire, grounding bushings, clamps, etc. as r required for complete grounding.
   A. Connections shall be either bolted-pressure-type, compression type or exothermic-welded type.
2. Provide a separate equipment grounding conductor in all feeder and branch circuits and all flexible and nonmetallic raceways.
3. Grounding Conductor Material: Copper.

Section 16070 - Hangers and Supports

1. Provide hangers and supports for equipment, raceways and cables, including weight of wire in raceways. All systems cabling shall be supported by bridal rings or similar means.
2. Use hot-dipped galvanized material or nonmetallic, U-channel systems for all damp and outdoor locations.
3. Steel material shall be used for dry locations.

Section 16075 - Electrical Identification

1. Provide labeling for raceways, cables and devices.
2. Color Coding of Phase Conductors:
   A. Conductors No. 8 AWG and smaller shall be factory color coded. Wire No. 6 AWG and larger may be color coded by field painting or color taping a 6-inch length of exposed end.
   B. Wiring for control systems shall be color-coded in accordance with the wiring diagrams furnished with the equipment.

	277/480 volts	120/208 volts
Phase a:	brown	black
Phase b:	orange	red
Phase c:	yellow	blue
Neutral:	gray	white
Ground	green	green
Travelers:	purple	pink

Section 16080 - Electrical Testing

1. Provide testing of all electrical systems and components as required by all applicable building codes and ordinances, UL, NEMA, ANSI, ICEA, NECA, etc., and as recommended by the electrical equipment manufacturers.

Section 16105 - Demolition for Remodeling

1. Field check all existing conditions prior to bidding and include an allowance for the removal and relocation of existing conduits, wires, devices, fixtures, or other equipment as indicated or as required to coordinate and adapt new and existing electrical systems to all other work required on this project. No extras will be allowed for alterations of a foreseeable nature required to achieve the end result as indicated on the drawings.
2. Where the reuse of existing conduits, outlets, junction boxes, etc., is permissible, make certain that the wiring for them is continuous from outlet to outlet and that all splices and insulations are in good condition. Provide modifications to assure that circuits, or system shall not pass through outlets or junction boxes which may be rendered inaccessible by changes to be made to the project. Existing conduits, wire, devices, etc., which shall be removed shall become the property of the owner unless otherwise noted.
3. Connect new work to existing in a manner that will assure proper raceway grounding throughout in conformance with the National Electrical Code.
4. Remodel Work, Cutting and Patching: Electrical contractor shall perform all cutting, channeling, chasing, drilling, etc., as required to install or remove electrical equipment in areas of remodeling. This work shall be performed so as to minimize damage to portions of wall finishes, surfaces, plastering, or the structures which are to be reused, resurfaced, plastered, or painted under other divisions of these specifications.
5. Carefully coordinate with the required remodeling work, cutting and patching etc., performed by other trades. Remove or relocate existing electrical conduits, wires, devices, fixtures and other equipment as necessary.
6. All outages on portions of existing electrical systems shall be minimized and shall be at a time and of a duration as accepted by the owner.

Section 16120 - Conductors and Cables 600-V and Less

1. Minimum size No. 12 AWG except for control or signal circuits, which may be No. 14 AWG or smaller. Increase conductor size as necessary to limit branch circuit voltage drop to 3 percent and service/feeder voltage drop to 2 percent.
2. All wiring shall be as follows:
   A. Branch circuits concealed in ceilings, walls, and partitions, and concealed in concrete or below slabs-on-grade: Type THHN-THWN, single conductors in raceway.
   B. Fire alarm circuits: Type THHN-THWN, in raceway or power-limited, fire-protective, signaling circuit cable, Type NPLFP or PLFP.
   C. Class 1 control circuits: Type THHN-THWN, in raceway.
   D. Class 2 control circuits: Type THHN-THWN, in raceway or power-limited cable, concealed in building finishes.
3. All conductors shall be copper; solid conductor for No.12 AWG and smaller, stranded for No. 10 AWG and larger.
4. Splices for No. 6 AWG and smaller shall be made with twist-on wire connectors.
5. Splices for No. 4 AWG and larger shall be made with solderless or compression type CU/ALR lugs.
6. Wiring for control systems shall be installed in conjunction with mechanical and miscellaneous equipment.
7. Install conductor at each outlet, with at least 6 inches of slack to allow for connection to device.
8. Testing: Perform the following field quality-control testing:
   A. Torque test conductor connections and terminations to manufacturer's recommended values.
   B. Perform continuity test on all power and equipment branch circuit conductors. Verify proper phasing connections.
   C. Insulation Test: Measure the insulation of feeder conductors. Measurements shall be taken between conductors, and conductors and ground. Resistance shall be 1,000,000 Ohms or more when tested at 500 Volts by megger without circuit loads.

Section 16130 - Raceways

1. All conductors shall be enclosed by conduit sized in accordance with Chapter 9, Table 4 of the National Electrical Code. Minimum size 1/2 inch. All conduits shall be concealed in finished areas.
2. Galvanized Rigid Metal Conduit (RMC) and Intermediate Metal Conduit (IMC) shall be utilized for above and below grade applications in accordance with Articles 344 and 342 of the National Electrical Code. All couplings shall be threaded.
3. Electrical Metallic Tubing (EMT) shall be utilized for all dry, above grade or above floor feeders and branch circuit homerun applications in accordance with Article 358 of the National Electrical Code. Couplings shall be steel set screw type.
4. Metal-Clad Cable (MC) with separate ground conductor shall be permitted for all concealed, above grade or above floor branch circuit applications excluding homeruns in accordance with Article 330 of the National Electrical Code. Connectors shall be listed for application of service indicated.
5. Flexible Metal Conduit (FMC) shall be utilized for all connections to vibrating equipment such as motors (minimum of 2'-0", maximum of 6'-0"), connections to lay-in type light fixtures or in remodel areas specifically noted for "fishing" in existing walls or non-accessible ceilings.
6. Surface metallic raceways shall be limited to only areas specifically noted and of size and type specified on the drawings.
7. All exposed conduits shall be installed parallel with or perpendicular to building lines.
8. Provide expansion type fittings for all conduits that cross expansion joints.
9. Conduits and/or circuits that penetrate fire-rated construction shall be sealed fire and smoke tight at the penetration in a manner that maintains the fire-resistance rating.

Section 16137 - Boxes, Enclosures and Cabinets

1. Outlet boxes:
   A. Four inch square or octagonal, zinc-coated sheet steel type.
   B. Outlet boxes shall be located so that transmission of sound through common walls will not occur.
   C. Enclosures exposed to weather or damp locations shall be weatherproof type.
2. Provide covers set to be flush with finished walls.
3. Pull Boxes and Junction Boxes: Junction boxes and pull boxes shall be provided as required. Size of boxes shall be in accordance with the current National Electrical Code requirements.
   A. Enclosures shall be NEMA type suitable for the surrounding area and conditions.
4. Floor Boxes: Floor boxes shall be cast metal, fully adjustable, or as specified on the drawings.

Section 16140 - Wiring Devices

1. Receptacles shall be 20 Amp Hubbell HBL5352 series specification grade, or acceptable. GFCI and exterior receptacles shall be Hubbell GF5352 series, or acceptable and if required provide weatherproof in-use metal type cover, or acceptable. Provide device color as directed by the architect, or to match base building standards, whichever is applicable.
2. Quiet operating type switches shall be 120/277-V, 20 Amp Hubbell 1221 series, or acceptable.
3. Provide special purpose outlets as required for equipment provided by others.
4. Device plates shall be high abuse nylon, color as directed by the architect, or to match base building standards, whichever is applicable.
5. Mount devices in accordance with the following schedule except where otherwise noted on the drawings or in areas with counters, baseboard heaters or in areas of block or brick construction:

Convenience receptacles:	long axis vertical at 1'-6" AFF to center *
Light switches:	latch side of door at 4'-0" AFF to center
Telephone outlets:	long axis vertical at 1'-6" AFF to center *

* Except in areas with counters, baseboard heaters, or in areas of block or brick construction.

Section 16145 - Lighting Control Devices

1. Occupancy Sensors: As specified on the drawings.
2. Multiple Contactors and Relays: Electrically operated and mechanically held, complying with UL 508 and NEMA ICS 2, with current rating for switching as required and control coil voltage to match control power source.
3. Testing: Set and operate devices to demonstrate their functions and capabilities in a methodical sequence that cues and reproduces actual operating functions.

Section 16180 - Equipment Wiring Systems

1. Provide branch circuits to equipment provided by others and to mechanical equipment and make all connections. Temperature control equipment wiring and connections shall be provided by the mechanical contractor.
2. Provide safety switches and/or thermal overload switches as required.
3. Heater units in all motor starters shall be sized for approximately one hundred fifteen percent (115%) of full load motor current. Check and coordinate all thermal protective devices with the equipment they protect.
4. Provide for each motor, one-half (1/2) horsepower and below, a horsepower rated disconnect switch and thermal overload protection unless internally provided with the motor. Thermal overload switches for single phase motors shall be Allen-Bradley Bulletin 600 or acceptable.
5. Carefully coordinate all electrical work with all other applicable divisions.

Section 16442 - Panelboards

1. Provide dead-front, circuit breaker type panels, size, voltage, amperage and number of branches as indicated on the drawings. Breakers shall be thermal magnetic type (bolted) employing quick-make and quick-break mechanism for manual operation as well as automatic operation. Automatic tripping shall be indicated by the breaker handle assuming a distinctive position from the manual "on" and "off" multi-pole breakers shall have a common trip. Tie handles will not be permitted.
2. All spaces shall be fully bussed.
3. Panelboards shall have a grounding bus for the equipment grounding system.
4. Circuit breakers shall have a minimum interrupting capacity as follows, unless otherwise noted:

120/208 Volts:	10,000 amperes
277/480 Volts:	14,000 amperes

5. Panelboards shall be a minimum twenty inches (20") wide.
6. All bussing shall be tin-plated, high strength, electrical grade aluminum alloy and extend entire length of the panelboard.
7. Distribution panelboards shall be provided with a hinged lockable door.
8. Lighting and appliance panelboards shall be provided with front cover screwed to the box.
9. Each panelboard shall be provided with a typed directory card installed in a transparent protective cover on inside of door panel.
10. Enclosure: NEMA type suitable for the surrounding area and conditions.
11. Install floor-mounted panelboards on 4 inch high concrete base extending a minimum of 2 inches beyond enclosure.
12. Testing: Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit. test continuity of each circuit. after installing panelboards and after electrical circuitry has been energized, demonstrate product capability and compliance with requirements. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
13. Upon completion of installation, inspect interior and exterior of panelboards. Remove paint splatters and other spots, dirt and debris. Vacuum dirt and debris; do not use compressed air to assist cleaning. Touch up scratched and marred finishes to match original finish.
14. Panelboards shall be as manufactured by Eaton Corp.; Cutler Hammer, General Electric Co., Siemens Energy and Automation, Inc., or Square D Co.

Section 16460 - Transformers (Low Voltage)

1. Transformers rated 15kVA and larger
   A. Comply with 10 CFR 431 (DOE 2016) efficiency levels.
   B. Marked as compliant with DOE 2016 efficiency levels by an NRTL.
2. Cores: Electrical grade, non-aging silicon steel with high permeability and low hysteresis losses.
   A. One leg per phase.
   B. Core volume shall allow efficient transformer operation at 10 percent above the nominal tap voltage.
   C. Grounded to enclosure.
3. Coils: Continuous windings without splices except for taps.
   A. Coil material: Aluminum or Copper.
   B. Internal coil connections: Brazed or pressure type.
   C. Terminal connections: welded or bolted.
4. Encapsulation: Transformers smaller than 30kVA shall have core and coils completely resin encapsulated.
5. Enclosure: Ventilated.
   A. NEMA 250, Type 2: Core and coil shall be encapsulated within resin compound to seal out moisture and air.
   B. KVA Ratings: Based on convection cooling only and not relying on auxiliary fans.
   C. Wiring Compartment: Sized for conduit entry and wiring installation.
   D. Finish: Comply with NEMA 250, gray weather-resistant enamel.
6. Insulation Class, Smaller Than 30kVA: 180 deg C, UL-component-recognized insulation system with a maximum of 115 deg C rise above 40 deg C ambient temperature.
7. Insulation Class, 30kVA and Larger: 220 deg C, UL-component-recognized insulation system with a maximum of 115 deg C rise above 40 deg C ambient temperature.
8. Grounding: Provide ground-bar kit or a ground bar installed on the inside of the transformer enclosure.
9. Electrostatic Shielding: Each winding shall have an independent, single, full-width copper electrostatic shield arranged to minimize interwinding capacitance.
   A. Arrange coil leads and terminal strips to minimize capacitive coupling between input and output terminals.
   B. Include special terminal for grounding the shield.
10. Transformers shall be as manufactured by Eaton Corp.; Cutler Hammer, General Electric Co., Siemens Energy and Automation, Inc., or Square D Co.

Section 16511 - Interior Lighting

1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified on the drawings or provide products from manufacturers with similar construction and photometric characteristics.
2. Fluorescent ballasts shall be electronic programmed rapid start type with less than 10 percent of total harmonic distortion, with input power factor above 97 percent, and provided with internal protection in case operating temperatures exceed a safe level of operation. Fluorescent ballasts shall be as manufactured by Advance, Universal, General Electric or Osram/Sylvania.
3. Exit lights shall conform to local code requirements.
4. Interior emergency fluorescent power supply units shall be self-contained, modular, battery-inverter unit, factory mounted within luminaire body, and shall comply with UL 924.
5. Lamps shall be as manufactured by Osram/Sylvania, Phillips, or General Electric.
6. Color temperature for fluorescent lamps shall be as specified in the drawings.
7. Set luminaires level, plumb, and square with ceiling and walls, and secure according to manufacturer's written instructions and approved submittal materials. Install lamps in each luminaire. Do not support luminaries to the work of other trades unless otherwise specified or noted. All luminaires shall be independently supported from structure. Provide all necessary additional supports and hangers to securely fasten and support all luminaires to structure.
8. Inspect each installed luminaire for damage. Replace damaged luminaires and components. Verify normal operation of each luminaire after installation. Interrupt the electrical supply to verify proper operation of the emergency lighting. If luminaires are malfunctioning, then repair or replace components and retest until luminaire operates properly.
9. Clean luminaires internally and externally after installation per manufacturer's Recommendations.
10. Replace any failed lamps in existing fixtures with matching lamp type and CCT.

Section 16620 - Standby Power Generator Systems

1. Performance Requirements
   A. Seismic Performance: Engine generator housing, tank, engine generator, batteries, battery racks, silencers, sound attenuating equipment, accessories, and components shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
   B. Comply with B11.19.
   C. Comply with NFPA 37, NFPA 70, NFPA 99, and NFPA 110.
   D. Comply with UL 2200.
   E. Engine Exhaust Emissions: Comply with EPA requirements and applicable state and local government requirements based upon intended usage Tier.
   F. Noise Emission: Comply with applicable state and local government requirements for maximum noise level at adjacent property boundaries.
   G. Environmental Conditions: Engine generator system shall be rated to withstand the normal environmental conditions for the location in which it will be installed without mechanical or electrical damage or degradation of performance capability. This includes, but is not limited to ambient temperature, relative humidity, and altitude.

Section 16714 - Communication Raceway Systems

1. Provide empty conduit systems with No. 14 AWG pull wire and back boxes. Back boxes shall be 4 inch square galvanized pressed steel with single gang plaster ring. Provide 3/4 inch conduit with pull wire from each back box to 6 inches above nearest accessible ceiling.
2. All equipment, wiring/cable, devices and coverplates shall be provided and installed by the owner.

Section 16721 - Fire Alarm System, Non-coded Addressable

1. Fire alarm device layouts and if applicable one-line diagram are for information only to indicate possible system configuration. The information shown is intended to be used as a guide by the contractor to complete their design and does not include all the necessary items for installation. The contractor shall be responsible for the design and installation of the fire alarm system in compliance with these specifications, NFPA 72, and local codes. The contractor shall prepare fire alarm system drawings sealed by a fire protection engineer for submittal to the authority having jurisdiction and to be used for construction as part of their scope of work.
   A. Relocate existing fire alarm devices and provide new devices as shown.
   B. Provide all necessary conduit and wiring to extend existing base building fire alarm system as necessary.
2. The fire alarm system installation shall comply with NFPA 72, all other code requirements and local authority requirements.
3. Manual pull stations: double-action with station reset to match existing. An integral addressable module shall be provided to communicate with the FACP and if applicable a remote annunciator.
   A. Install such that handle is 48 inches above finished floor.
4. Smoke detectors: photoelectric type with integral led light to match existing .
5. Duct smoke detectors: photoelectric type with air sampling tubes extending the full length of the duct to match existing. Detectors shall be provided with an interface to the air handling unit control for shut down of the unit when smoke is detected.
6. Combination devices: factory-integrated audible and visual devices in a single-mounting assembly to match existing.
   A. Horns to match existing. Horns shall produce the ANSI temporal pattern at a sound-pressure level of 85 db, measured 10 feet from the horn per UL 464. Temporal pattern shall be synchronized.
   B. Visual alarm devices to match existing shall be listed under UL 1971 with clear polycarbonate lens. The word "fire" shall be engraved in minimum 1 inch high letters on faceplate. Strobes shall comply with NFPA 72 requirements for flash frequency and shall be synchronized. Provide candela level as required to suite the space in which it is installed.
   C. Visual devices shall be mounted not less than 80 inches above the finished floor or 6 inches below ceiling, whichever is lower.
7. LED indicating lights with integral test switch shall be provided for detectors that may not be readily visible. Light shall be connected to turn on steady when the associated device is in an alarm or trouble mode. Device shall mount in a single gang stainless steel plate. A red, laminated, phenolic-resin identification plate at the indicating light shall identify, in engraved white letters, device initiating the signal and room where the device is located.
8. The fire alarm control panel (FACP) and annunciator panel (FAAP): existing to remain.
   A. Upgrade and reprogram existing FACP software to reflect remodel conditions as required through a subcontractor to a factory authorized installer.
   B. Revise FAAP configuration and information to reflect remodel changes.
9. Emergency power supply system existing to remain.
   A. Provide new battery calculations as part of the shop drawing submittal as required by the authority having jurisdiction.
10. Provide control and/or monitor modules for devices such as fire/smoke dampers, etc. as required. Addressable modules shall be located within 3'-0" of the monitored switch or circuit.
11. Digital alarm communicator transmitter existing to remain.
12. Functional description of system.
   A. Control of system: by the FACP.
   B. System supervision: automatically detect and report open circuits, shorts, and grounds of wiring for initiating devices, signaling line, and notification appliance circuits.
   C. Transmission to remote alarm receiving station.
   D. Performance of initiating device circuits: NFPA 72, Style B circuits. Circuits shall be installed in conduit.
   E. Performance of notification appliance circuits: NFPA 72, Style Y. Circuits shall be installed in conduit.
   F. Performance of device monitoring signaling line circuits: NFPA 72, Style 4. circuits shall be installed in conduits.
13. Basic alarm performance requirements: unless otherwise indicated, operation of a manual station, automatic alarm operation of a heat detector, operation of a sprinkler flow device, or verified automatic alarm operation of a smoke detector shall initiate the following:
   A. Notification appliance operation.
   B. Identification at the FACP of the device address originating the alarm.
   C. Provide mechanical unit shut down and control of dampers, etc. as required.
   D. Provide control of door hold-opens or other doors as required.
   E. Released doors locked by security system.
14. Testing: test the system according to procedures outline in NFPA 72.
15. Provide certificate of operation at completion of testing and after any malfunctions have been corrected.

DVO PROJECT — 191034

yes prep
PUBLIC SCHOOLS

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No.	Description	Date
	ISSUE FOR PRICING / PERMIT	03/01/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE
CAMPUS
LEGACY
CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

ELECTRICAL
SPECIFICATIONS

Project Number	17018
Date	03/01/19
Drawn By	KL
Checked By	JF

E001

Scale As Indicated

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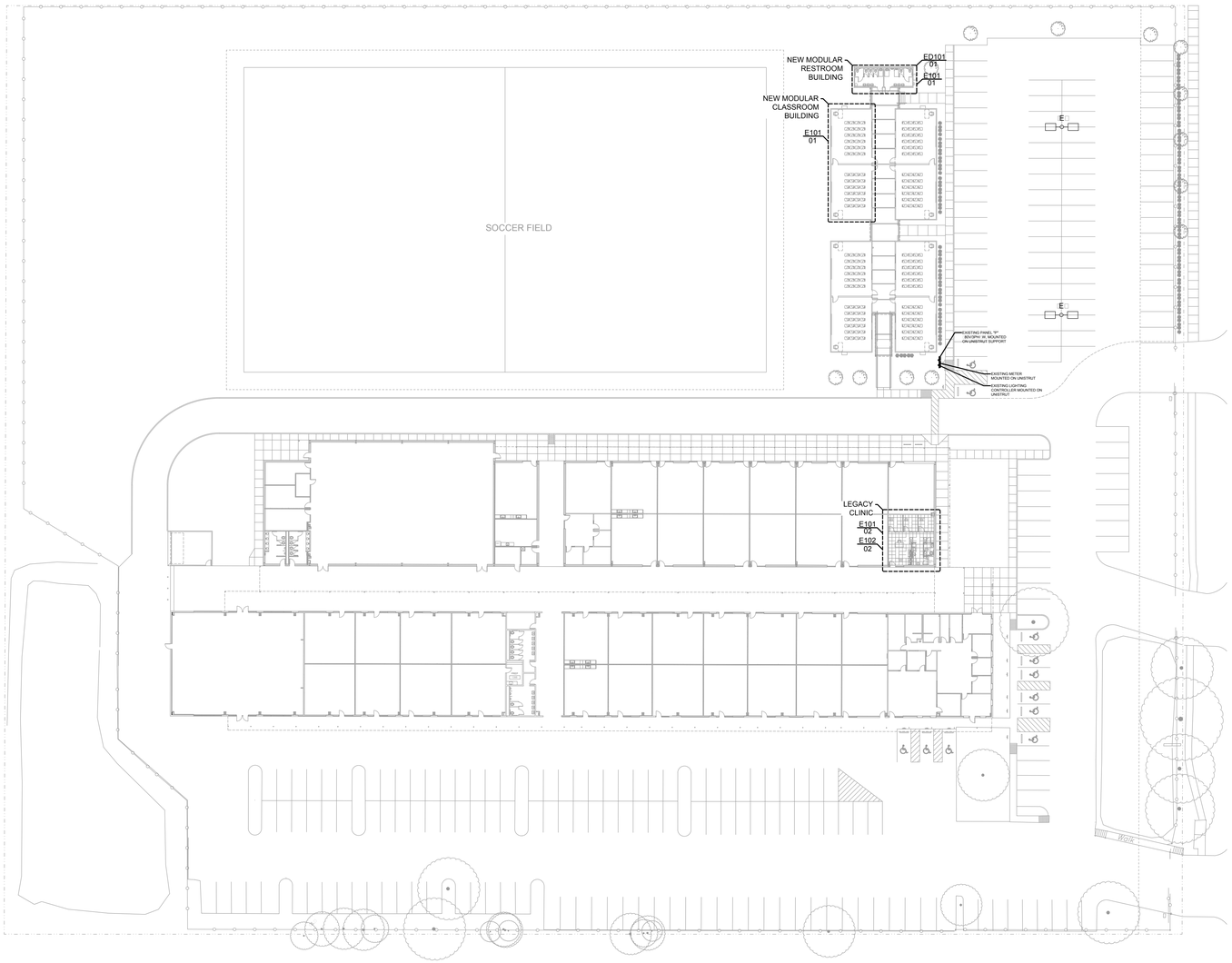

01 ELECTRICAL SITE PLAN
SCALE: 1/32"=1'-0"

GENERAL SITE NOTES:

A. COORDINATE ALL WORK OTHER TRADES.
B. COORDINATE INSTALLATION REQUIREMENTS, EXACT LOCATIONS AND CONDUIT TRADE SIZING AND ROUTING WITH UTILITIES PRIOR TO BEGINNING ANY WORK.
C. WIRE ALL EMERGENCY EXTERIOR EGRESS FIXTURES THROUGH BUILDING LIGHTING CONTROLS.
D. LUMINAIRES SHALL BE FURNISHED AND INSTALLED WITH LAMPS, BALLAST:S□AND MOUNTING HARDWARE. ELECTRICAL CONTRACTOR SHALL SUBMIT FIXTURE CUT SHEETS TO CLIENT AND ARCHITECT FOR THEIR FINAL APPROVAL PRIOR TO ORDERING OF THE LUMINAIRES.
E. ELECTRICAL CONTRACTOR SHALL COORDINATE LIGHTING FIXTURE QUANTITIES, MOUNTING REQUIREMENTS, FINISHES, FIXTURE AVAILABILITY AND LEAD TIME FOR DELIVERY TO SITE.
F. FLUORESCENT AND LED LUMINAIRES THAT CONTAIN BALLAST:S□ AND/OR LED DRIVERS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS PER NEC ARTICLE □10.130.G□ REQUIREMENTS. DISCONNECTING MEANS IS NOT REQUIRED FOR EMERGENCY ILLUMINATION REQUIRED IN 700.16.
G. CONTRACTOR SHALL COORDINATE EXACT DEVICE AND EQUIPMENT LOCATIONS WITH CLIENT /ARCHITECT, EQUIPMENT SUBCONTRACTOR OR UTILITY CONSULTANT PRIOR TO BEGINNING ANY WORK.
H. RECEPTACLE OUTLETS AND SWITCHES SHALL BE LABELED WITH DESIGNATED PANEL AND CIRCUIT NUMBER ON THE COVER PLATE.
I. ALL 125-VOLT, SINGLE PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN RESTROOMS, KITCHENFOOD PREP AREAS, OUTDOOR, WITHIN SIX FEET OF THE OUTSIDE EDGE OF A SINK, OR IN GARAGES, SERVICE BAYS, AND SIMILAR AREAS WHERE ELECTRICAL HAND TOOLS OR PORTABLE LIGHTING EQUIPMENT ARE TO BE USED SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER □GFCI□ PROTECTION FOR PERSONNEL PER NATIONAL ELECTRICAL CODE □NEC□ ARTICLE 210.8□GFCI DEVICE SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION.
J. ELECTRICAL CONTRACTOR SHALL MAINTAIN DEDICATED ELECTRICAL SPACE IN FRONT AND ABOVE ALL ELECTRICAL EQUIPMENT REQUIRING SERVICING WHILE ENERGIZED. THIS INCLUDES CONTROL PANELS AND ELECTRICAL DISCONNECTS FOR HVAC EQUIPMENT ON LOCATED ON ROOFTOPS AND ABOVE OR BELOW CEILING. PENETRATIONS SUCH AS ROOF JACKS FOR ELECTRICAL POWER, LOW VOLTAGE CONTROL POWER, REFRIGERANT LINES, VENT PIPES, ETC., AND INCLUDING GAS LINES, DUCTWORK, ROOF DRAINS, SCREENING WALLS AND OTHER EQUIPMENT OF ANY TYPE, ARE NOT TO INTRUDE INTO DEDICATED ELECTRICAL SPACE. MINIMUM SPACE IN FRONT OF ELECTRIC EQUIPMENT SHALL BE THE WIDTH OF THE EQUIPMENT OR 30 INCHES, WHICHEVER IS GREATER, 36 INCHES OUT FROM ENCLOSURE FRONT AT THE HEIGHT OF 6.5 FEET.
K. ELECTRICAL UTILITY SERVICE SECONDARY CONDUCTORS SHALL BE BURIED AT A MINIMUM DEPTH OF □ COORDINATE ADDITIONAL INSTALLATION REQUIREMENTS AND ROUTING WITH ELECTRICAL UTILITY PRIOR TO BEGINNING ANY WORK.
L. FOR PAD MOUNTED TRANSFORMERS ELECTRICAL CONTRACTOR SHALL PROVIDE □2□6" CONDUITS, OR ELECTRICAL UTILITY STANDARD SIZING,BURIED AT A MINIMUM DEPTH OF □" AND ENCASED IN RED DYED CONCRETE.COORDINATE ADDITIONAL INSTALLATION REQUIREMENTS AND ROUTING WITH ELECTRICAL UTILITY PRIOR TO BEGINNING ANY WORK.
M. PVC CONDUITS INSTALLED UNDERGROUND SHALL BE BURIED IN ACCORDANCE WITH NEC ARTICLES 352.10 G□,300.5 AND TABLE 300.5 REQUIREMENTS FOR PARKING LOTS: MINIMUM DEPTH OF 2□" TO THE TOP OF THE CONDUIT.
N. IF RACEWAYS ARE INSTALLED EXPOSED TO DIRECT SUNLIGHT ON OR ABOVE ROOFTOPS CORRECTIONS NEED TO BE PROVIDED FOR CONDUCTOR SIZES BASED ON AMBIENT TEMPERATURE CORRECTION FACTORS. TEMPERATURE CORRECTION FACTORS SHOWN IN NEC TABLE 310.15.B□3□C□SHALL BE ADDED TO THE OUTDOOR TEMPERATURE TO DETERMINE THE APPLICABLE AMBIENT TEMPERATURE FOR APPLICATION OF THE CORRECTION FACTORS IN TABLE 310.15.B□2□A□OR TABLE 310.15.B□2□B□.

yes prep
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DVO PROJECT – 191034

No.	Description	Date
	ISSUE FOR PRICING / PERMIT	03/01/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE
CAMPUS
LEGACY
CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

ELECTRICAL DEMOLITION FLOOR PLAN

Project Number	17018
Date	03/01/19
Drawn By	KL
Checked By	JF

E100

Scale As Indicated

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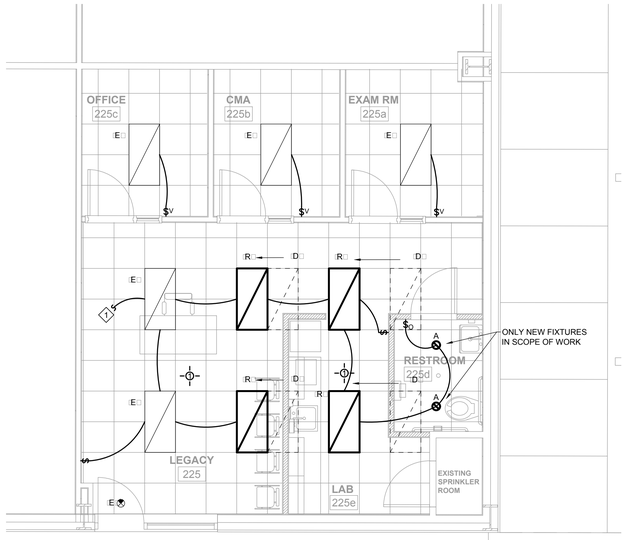
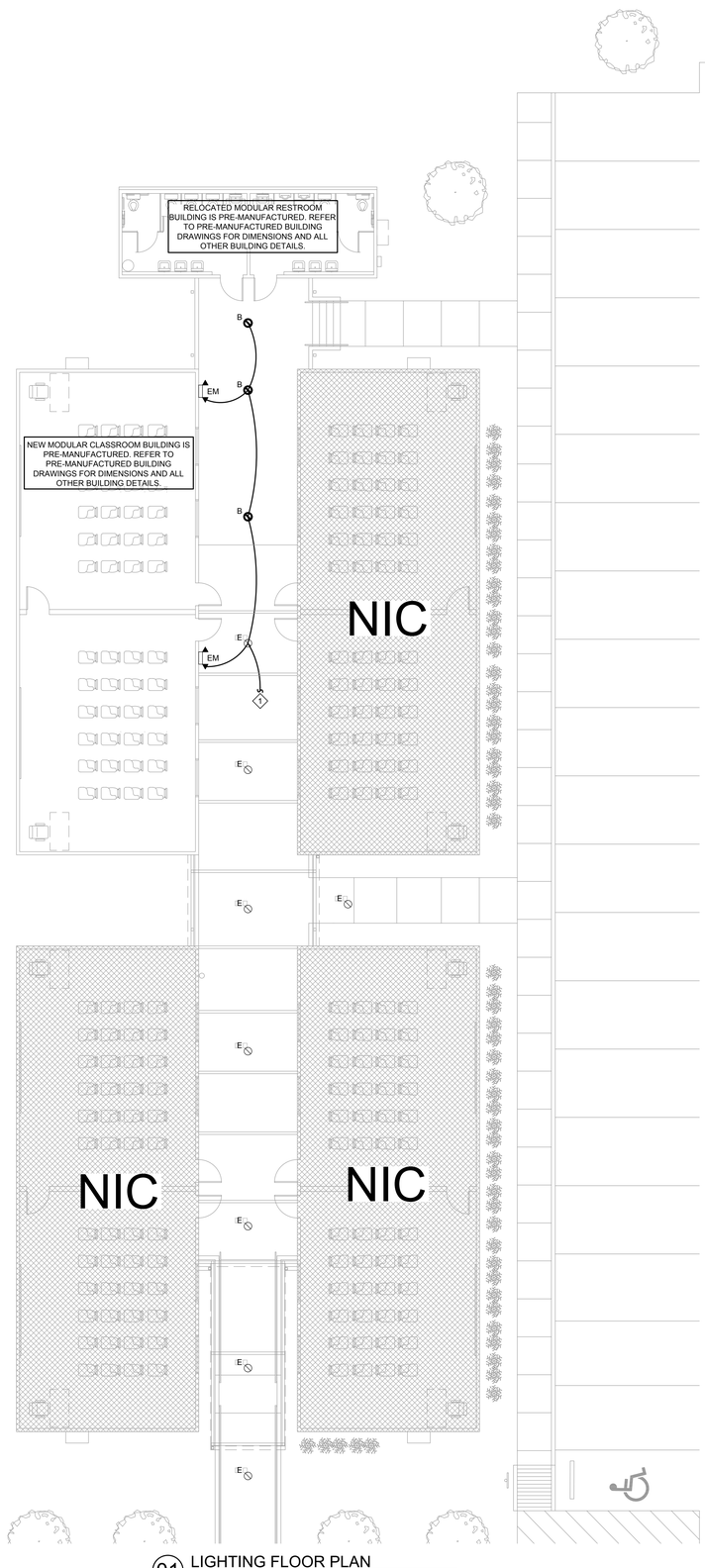


02 LIGHTING FLOOR PLAN - LEGACY CLINIC
SCALE: 1/8"=1'-0"



01 LIGHTING FLOOR PLAN
SCALE: 1/8"=1'-0"

LUMINAIRE SCHEDULE

MARK	MANUFACTURER AND MODEL	VOLTAGE	LAMPS	INPUT WATTAGE	MOUNTING	DESCRIPTION	NOTES
A	LITHONIA LIGHTING LDN6-35/5-L06AR-LSS-MVOLT-GZ 10	UNV	LED 3500K LUMENS	20	RECESSED	6" DIAMETER LED RECESSED DOWNLIGHT WITH SEMI-SPECULAR REFLECTOR AND 1 DIMMING DRIVER	1,2
B	MATCH EXISTING	UNV	LED 3000K LUMENS	30	RECESSED	EXTERIOR LED RECESSED DOWNLIGHT. WET LOCATION RATED.	1,2
EM	LITHONIA LIGHTING ELM2L-SDRT-WPVS	UNV	LED	5	SURFACE	EXTERIOR EMERGENCY LIGHTING. WET LOCATION RATED.	1

NOTES
1. CONFIRM FIXTURE OPTIONS AND MOUNTING HEIGHTS WITH TENANT, ARCHITECT AND ARCHITECTURAL DRAWINGS.
2. INDICATES OPTIONS TO BE COORDINATED WITH ARCHITECT AND TENANT PRIOR TO ORDERING.
3. NEW EXTERIOR LIGHTING TO BE CONNECTED TO INVERTER TO PROVIDE EXTERIOR EMERGENCY EGRESS LIGHTING IN THE EVENT OF A LOSS OF BUILDING POWER.

GENERAL LIGHTING NOTES:

A. LUMINAIRES AND SWITCHES LABELED " E " ARE EXISTING TO REMAIN WHERE SHOWN UNLESS OTHERWISE NOTED. MAINTAIN CIRCUIT CONTINUITY FOR THESE DEVICES AS REQUIRED.

B. REMOVED LUMINAIRES AND EXIT SIGNS NOT BEING REUSED SHALL BE RETURNED TO BUILDING OWNER FOR FUTURE USE.

C. ELECTRICAL CONTRACTOR SHALL INSPECT EXISTING AND RELOCATED FIXTURES IN WORK AREA. REPLACE ALL NECESSARY COMPONENTS, RELAMP AND CLEAN AS REQUIRED TO MAINTAIN LIKE-NEW LIGHT FIXTURE APPEARANCE. ENSURE THAT ALL LAMPS HAVE THE SAME COLOR RENDERING INDEX (CRI) AND COLOR TEMPERATURE (KELVIN), AND ARE OF CLIENT APPROVED MANUFACTURER THROUGHOUT THE AREA OF WORK. VERIFY LIGHT FIXTURE AND LAMP REQUIREMENTS WITH CLIENT PRIOR TO BEGINNING ANY WORK.

D. LUMINAIRES SHALL BE FURNISHED AND INSTALLED WITH LAMPS, BALLAST(S), AND MOUNTING HARDWARE. ELECTRICAL CONTRACTOR SHALL SUBMIT FIXTURE CUT SHEETS TO CLIENT AND ARCHITECT FOR THEIR FINAL APPROVAL PRIOR TO ORDERING OF THE LUMINAIRES.

E. ELECTRICAL CONTRACTOR SHALL COORDINATE LIGHTING FIXTURE QUANTITIES, MOUNTING REQUIREMENTS, FINISHES, FIXTURE AVAILABILITY AND LEAD TIME FOR DELIVERY TO SITE.

F. FLUORESCENT AND LED LUMINAIRES THAT CONTAIN BALLAST(S) AND/OR LED DRIVERS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS PER NEC ARTICLE (10.130 G) REQUIREMENTS. DISCONNECTING MEANS IS NOT REQUIRED FOR EMERGENCY ILLUMINATION REQUIRED IN 700.16.

G. COORDINATE LAYOUT AND INSTALLATION OF LUMINAIRES AND MOUNTING MEANS WITH OTHER CONSTRUCTION THAT IS SUPPORTED OR THAT PENETRATES CEILINGS, INCLUDING BUT NOT LIMITED TO HVAC EQUIPMENT, FIRE-SUPPRESSION SYSTEM, AND PARTITION ASSEMBLIES PRIOR TO BEGINNING ANY WORK. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN HVAC EQUIPMENT AND LOCATION OF LUMINAIRES. VERIFY CLEARANCES REQUIRED.

H. ALL LUMINAIRES SHALL BE POSITIVELY ATTACHED TO THE SUSPENDED CEILING SYSTEM BY MECHANICAL MEANS. LISTED SUPPORT CLIPS, LISTED FOR USE WITH THE TYPE OF CEILING GRID MEMBER AND LUMINAIRE, ARE PERMITTED AT EACH FIXTURE CORNER. FIXTURES WEIGHING LESS THAN 50 POUNDS SHALL ALSO HAVE A MINIMUM OF TWO NO. 9 GAUGE WIRES CONNECTED FROM THE OPPOSITE CORNERS OF THE FIXTURE HOUSING TO STRUCTURE. FIXTURES ABOVE 50 POUNDS SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE. FIXTURES OF SIZES LESS THAN CEILING GRID SHALL BE SUPPORTED INDEPENDENTLY WITH AT LEAST TWO 3/ -INCH LISTED METAL CHANNELS SPANNING AND SECURED TO CEILING TEES AND SUPPORTED WITH WIRES OR ROD TO BUILDING STRUCTURE.

I. ALL LUMINAIRES AND FLEXIBLE WIRING WHIPS SHALL BE SUPPORTED INDEPENDENTLY OF THE GRID SUPPORT SYSTEM.

J. ELECTRICAL CONTRACTOR SHALL PURCHASE ANY ADDITIONAL LUMINAIRES REQUIRED, DUE TO DAMAGE OR CLIENT REQUEST. MATCH EXISTING LUMINAIRES IN THE AREA.

K. MOUNT MULTIPLE LIGHT SWITCHES IN A MULTIPLE GANG BOX WITH SINGLE COVER PLATE.

L. MULTIWIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH A SIMULTANEOUS DISCONNECTING MEANS TO DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT OF ORIGIN. DISCONNECTION CAN BE ACCOMPLISHED THROUGH LISTED HANDLE TIES USED WITH SINGLE-POLE CIRCUIT BREAKERS OR MULTI-POLE DEVICES. BRANCH CIRCUIT(S) SERVING EMERGENCY LIGHTING SHALL NOT BE PART OF A MULTI-WIRE BRANCH CIRCUIT.

M. GROUNDED AND UNGROUNDED CONDUCTORS OF EACH MULTI-WIRE BRANCH CIRCUIT SHALL BE GROUPED WITH WIRE TIES OR SIMILAR MEANS AT A MINIMUM OF ONE LOCATION WITHIN THE PANELBOARD OR OTHER POINT OF ORIGIN.

N. SWITCHES CONTROLLING LIGHTING LOADS: WHERE SWITCHES CONTROL LIGHTING LOADS SUPPLIED BY A GROUNDED GENERAL PURPOSE BRANCH CIRCUIT, THE GROUNDED CIRCUIT CONDUCTOR (NEUTRAL WIRE) FOR THE CONTROLLED LIGHTING CIRCUIT SHALL BE PROVIDED AT THE SWITCH LOCATION. EXISTING SWITCHES IN REMODELED SPACES SHALL NOT BE EXEMPT FROM THIS REQUIREMENT.

O. WHERE DIMMING CONTROL IS SPECIFIED AS A PORTION OF A CIRCUIT THAT ALSO HAS SWITCHED LIGHTING IN ADJACENT SPACES, PROVIDE A SEPARATE, DEDICATED NEUTRAL WIRE FROM THE DIMMING DEVICE BACK TO THE ORIGINATING PANEL.

P. IN REMODEL AREAS WHERE OCCUPANCY SENSING DEVICES ARE SPECIFIED AND ARE REPLACING EXISTING MANUAL SNAP SWITCH CONTROL OF THE LIGHTING, PROVIDE A NEUTRAL CONDUCTOR FROM THE LIGHTING CIRCUIT BEING CONTROLLED TO THE OCCUPANCY SENSING DEVICE (OR SWITCH/POWER PACK, WHERE LOW VOLTAGE SENSORS ARE SPECIFIED). FOR BIDDING PURPOSES, ASSUME THAT THE EXISTING SNAP SWITCHES ARE WIRED WITHOUT A NEUTRAL CONDUCTOR, AND A NEW NEUTRAL CONDUCTOR WILL BE REQUIRED.

Q. ALL SWITCHES SHALL BE LABELED WITH DESIGNATED PANEL AND CIRCUIT NUMBER(S) ON THE COVER PLATE.

R. PROVIDE AN UNSWITCHED HOT AT EACH EMERGENCY LIGHT FIXTURE AND EMERGENCY LIGHTING UNIT. EMERGENCY LIGHTING SHALL BE SUPPLIED WITH A BATTERY TO SUPPLY AND MAINTAIN EMERGENCY LIGHTING LEVELS FOR A MINIMUM PERIOD OF 90 MINUTES.

S. SHADED LUMINAIRES, EMERGENCY LIGHTING UNITS, AND EXIT SIGNS SHALL BE CONNECTED TO THE THE NORMAL LIGHTING CIRCUIT IN THE AREA AND CONNECTED AHEAD OF ANY CONTROLS.

T. EMERGENCY LUMINAIRES SHALL WITH SWITCH LEG SUBSCRIPT LETTER SHOWN SHALL BE CONTROLLED ALONG WITH OTHER LUMINAIRES SHARING SWITCH LEG SUBSCRIPT LETTER. ELECTRICAL CONTRACTOR SHALL CONNECT EMERGENCY LIGHT FIXTURE PER MANUFACTURER'S WIRING DIAGRAMS. SWITCHED EMERGENCY BALLAST WIRING CONFIGURATION REQUIRES CONNECTION TO SWITCHED AND UNSWITCHED CONDUCTORS OF SAME LIGHTING CIRCUIT.

U. ALL EXIT SIGNS ARE NEW, UNLESS NOTED OTHERWISE. MATCH NEW EXIT SIGNS WITH EXISTING. LOCATIONS OF EXIT SIGNS SHALL BE COORDINATED WITH LIFE SAFETY DRAWINGS AND LOCAL AUTHORITIES. PROVIDE SIGNS IN ADDITIONAL LOCATIONS, IF REQUIRED, BY LOCAL AUTHORITIES.

V. MOUNT NEW WALL SWITCHES AT (6" TO BOX CENTERLINE ABOVE FINISHED FLOOR (A.F.F.) TO COMPLY WITH ADA STANDARDS.

W. ELECTRICAL CONTRACTOR SHALL TEST BATTERIES IN ALL REUSED OR EXISTING EXIT SIGNS, EMERGENCY LIGHT UNITS, AND EMERGENCY FLUORESCENT LUMINAIRES. REPLACE BATTERIES, UNITS, OR BALLASTS IF REQUIRED.

KEYED POWER NOTES:

1. NO NEW LIGHTING CIRCUITS REQUIRED. ELECTRICAL CONTRACTOR TO CONNECT NEW, EXISTING AND RELOCATED LUMINAIRES TO EXISTING LIGHTING CIRCUIT. PROVIDE JUNCTION BOXES, CONDUITS, CONDUCTORS, POWER PACKS AND ADDITIONAL ELECTRICAL EQUIPMENT TO REWORK/EXTEND EXISTING WIRING IN CONFIGURATION SHOWN. DETERMINE LOAD FOR AFFECTED CIRCUIT(S) AND NOTIFY ENGINEER IF LOAD EXCEEDS 80% OF CIRCUIT AMPACITY.

yes prep PUBLIC SCHOOLS

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No.	Description	Date
	ISSUE FOR PRICING / PERMIT	03/01/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE
CAMPUS
LEGACY
CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

LIGHTING
FLOOR PLAN

Project Number	17018
Date	03/01/19
Drawn By	KL
Checked By	JF

E101

Scale As Indicated

DVO PROJECT – 191034

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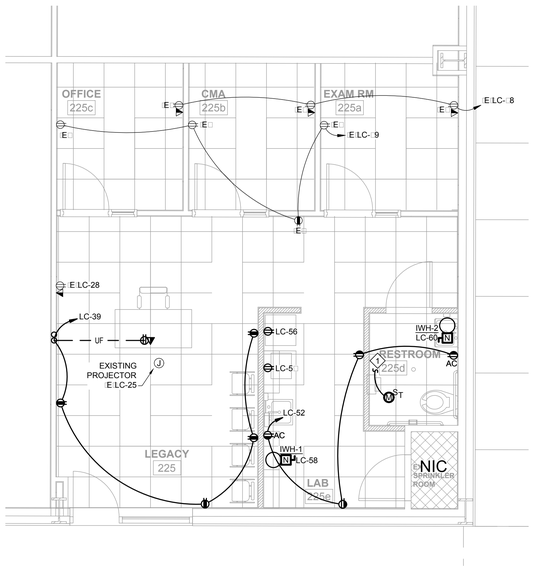
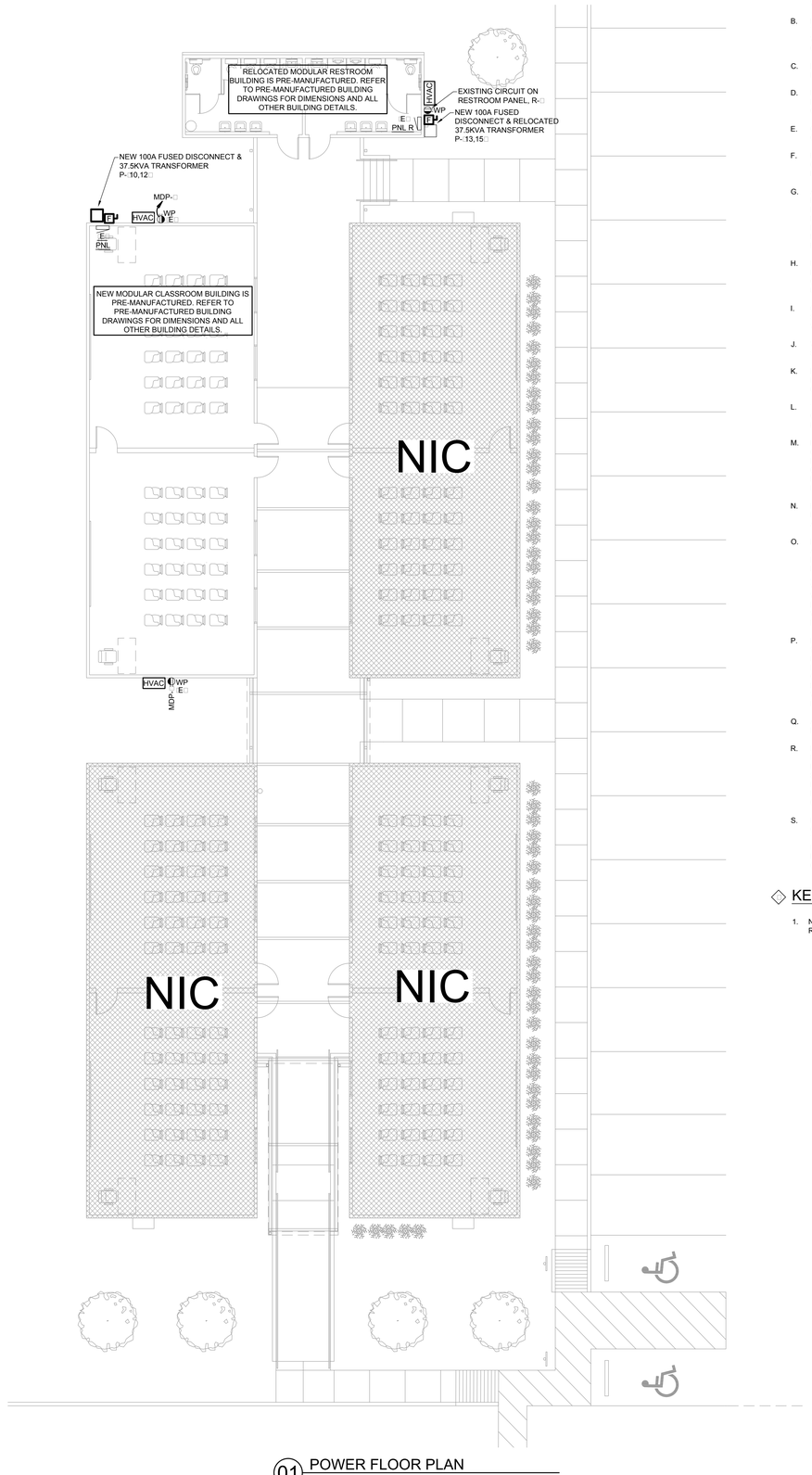


02 POWER FLOOR PLAN - LEGACY CLINIC
SCALE: 1/8"=1'-0"



01 POWER FLOOR PLAN
SCALE: 1/8"=1'-0"

GENERAL POWER NOTES:

A. EXISTING POWER AND TELECOMMUNICATIONS OUTLETS LABELED "E" ARE TO REMAIN WHERE SHOWN ON PLAN, UNLESS NOTED OTHERWISE (U.N.O.).

B. RETAIN CIRCUIT CONTINUITY FOR ALL DEVICES AFFECTED BY REMODEL WORK THAT ARE TO REMAIN. WHERE EXISTING RECEPTACLES IN EXTERIOR PERIMETER WALL CONFLICT WITH NEW WALL PARTITIONS, REMOVE DEVICE AND REWORK/REWIRE CIRCUIT FOR CONTINUITY AS REQUIRED.

C. ELECTRICAL CONTRACTOR SHALL VERIFY THAT ALL EXISTING AND RELOCATED OUTLETS IN PROJECT SCOPE ARE FUNCTIONING. REPLACE DEVICE WITH NEW IF NECESSARY.

D. NEW WALL MOUNTED RECEPTACLES AND TELECOMMUNICATIONS OUTLETS SHALL BE MOUNTED AT 18" TO CENTERLINE OF BOX ABOVE FINISHED FLOOR (A.F.F.). (U.N.O. TO COMPLY WITH ADA REQUIREMENTS.

E. CONTRACTOR SHALL COORDINATE EXACT DEVICE AND EQUIPMENT LOCATIONS WITH OWNER/CLIENT/ARCHITECT OR EQUIPMENT SUBCONTRACTOR.

F. RECEPTACLE OUTLETS AND SWITCHES SHALL BE LABELED WITH DESIGNATED PANEL AND CIRCUIT NUMBER ON THE COVER PLATE. JUNCTION BOXES IN CEILING SPACE SHALL HAVE PANEL DESIGNATIONS AND CIRCUIT NUMBERS MARKED ON THE COVER.

G. ALL 125-VOLT, SINGLE PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN RESTROOMS, KITCHEN/FOOD PREP AREAS, OUTDOOR, WITHIN SIX FEET OF THE OUTSIDE EDGE OF A SINK, OR IN GARAGES, SERVICE BAYS, AND SIMILAR AREAS WHERE ELECTRICAL HAND TOOLS OR PORTABLE LIGHTING EQUIPMENT ARE TO BE USED SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR PERSONNEL PER NATIONAL ELECTRICAL CODE (NEC) ARTICLE 210.8. GFCI DEVICE SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION.

H. MULTIWIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH A SIMULTANEOUS DISCONNECTING MEANS TO DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT OF ORIGIN. DISCONNECTION CAN BE ACCOMPLISHED THROUGH LISTED HANDLE TIES USED WITH SINGLE-POLE CIRCUIT BREAKERS OR MULTI-POLE DEVICES.

I. GROUNDED AND UNGROUNDED CONDUCTORS OF EACH MULTI-WIRE BRANCH CIRCUIT SHALL BE GROUPED WITH WIRE TIES OR SIMILAR MEANS AT A MINIMUM OF ONE LOCATION WITHIN THE PANELBOARD OR OTHER POINT OF ORIGIN.

J. WHEN INSTALLED ON THE EDGES OF METAL STUDS OUTLET BOXES ARE REQUIRED TO BE SECURED IN PLACE BY BOX-BACK SUPPORTS PER NEC ARTICLE 314.23.

K. ELECTRICAL CONTRACTOR SHALL X-RAY CONCRETE FLOORS AND WALLS PRIOR TO ANY REQUIRED SAW CUTTING OR CORE-DRILLING. COORDINATE SCHEDULING WITH GENERAL CONTRACTOR.

L. TELECOMMUNICATIONS CABLING SHALL BE INSTALLED BY CLIENT'S VENDOR. ELECTRICAL CONTRACTOR SHALL COORDINATE REQUIRED JUNCTION BOXES AND RACEWAY ROUGH-INS WITH APPROPRIATE VENDOR.

M. PROVIDE AND INSTALL 3/4" CONDUIT FOR EACH SINGLE TELECOMMUNICATIONS OUTLET CONTAINING (1) TELECOMMUNICATIONS CABLE. PROVIDE AND INSTALL 1" CONDUIT FOR EACH TELECOMMUNICATIONS OUTLET CONTAINING MULTIPLE TELECOMMUNICATIONS CABLES. CONDUITS TO BE STUBBED A MINIMUM 3" INTO ACCESSIBLE CEILING SPACE. BUSHED. INSTALL INSULATION BUSHING AND PULL STRING. COORDINATE ADDITIONAL INSTALLATION REQUIREMENTS WITH TELECOMMUNICATIONS CONTRACTOR.

N. BACK-TO-BACK OUTLETS IN THE SAME WALL AND THRU-WALL TYPE BOXES ARE NOT PERMITTED. PROVIDE CHASE NIPPLE FOR ALL OUTLETS SHOWN ON OPPOSITE SIDES OF A COMMON WALL TO MINIMIZE SOUND TRANSMISSION.

O. ELECTRICAL CONTRACTOR SHALL MAINTAIN DEDICATED ELECTRICAL SPACE IN FRONT AND ABOVE ALL ELECTRICAL EQUIPMENT REQUIRING SERVICING WHILE ENERGIZED. THIS INCLUDES CONTROL PANELS AND ELECTRICAL DISCONNECTS FOR HVAC EQUIPMENT ON LOCATED ON ROOFTOPS AND ABOVE OR BELOW CEILING. PENETRATIONS SUCH AS ROOF JACKS FOR ELECTRICAL POWER, LOW VOLTAGE CONTROL POWER, REFRIGERANT LINES, VENT PIPES, ETC., AND INCLUDING GAS LINES, DUCTWORK, ROOF DRAINS, SCREENING WALLS AND OTHER EQUIPMENT OF ANY TYPE, ARE NOT TO INTRUDE INTO DEDICATED ELECTRICAL SPACE. MINIMUM SPACE IN FRONT OF ELECTRIC EQUIPMENT SHALL BE THE WIDTH OF THE EQUIPMENT OR 30 INCHES, WHICHEVER IS GREATER, 36 INCHES OUT FROM ENCLOSURE FRONT AT THE HEIGHT OF 6.5 FEET.

P. HEATING, AIR-CONDITIONING, AND REFRIGERATION EQUIPMENT SHALL BE PROVIDED A 125-VOLT, 15- OR 20-AMPERE RATED RECEPTACLE OUTLET, INSTALLED AT AN ACCESSIBLE LOCATION FOR THE SERVICING OF HEATING, AIR-CONDITIONING, AND REFRIGERATION EQUIPMENT. THE RECEPTACLE SHALL BE LOCATED WITHIN 25 FEET OF THE EQUIPMENT ON THE SAME LEVEL AND SHALL NOT BE CONNECTED TO THE LOAD SIDE OF THE EQUIPMENT DISCONNECTING MEANS. THE RECEPTACLE OUTLET SHALL BE WEATHERPROOF AND GFCI PROTECTED IF INSTALLED OUTDOORS OR IN A WET LOCATION.

Q. AN INDIVIDUAL DISCONNECTING MEANS SHALL BE PROVIDED LOCATED IN SIGHT FROM EACH MOTOR OR DRIVEN MACHINERY IN ACCORDANCE WITH NEC ARTICLE 430.

R. MECHANICAL CONTRACTOR SHALL FURNISH STARTERS FOR ALL THREE-PHASE MECHANICAL EQUIPMENT. STARTERS SHALL BE NEMA RATED AND HAVE OVERLOAD PROTECTION WITH MANUAL RESET. ELECTRICAL CONTRACTOR SHALL INSTALL STARTERS EXCEPT WHERE SUPPLIED AS INTEGRAL PART OF MECHANICAL EQUIPMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE SAFETY DISCONNECT SWITCHES FOR FOR MECHANICAL EQUIPMENT NOT SPECIFICALLY INDICATED TO HAVE MECHANICAL CONTRACTOR PROVIDED DISCONNECTS.

S. IF RACEWAYS ARE INSTALLED EXPOSED TO DIRECT SUNLIGHT ON OR ABOVE ROOFTOPS CORRECTIONS NEED TO BE PROVIDED FOR CONDUCTOR SIZES BASED ON AMBIENT TEMPERATURE CORRECTION FACTORS. TEMPERATURE CORRECTION FACTORS SHOWN IN NEC TABLE 310.15(B)(3)(C) SHALL BE ADDED TO THE OUTDOOR TEMPERATURE TO DETERMINE THE APPLICABLE AMBIENT TEMPERATURE FOR APPLICATION OF THE CORRECTION FACTORS IN TABLE 310.15(B)(2)(A) OR TABLE 310.15(B)(2)(B).

◇ KEYED POWER NOTES:

1. NEW RESTROOM EXHAUST FAN SHALL BE CIRCUITED AND CONTROLLED WITH RESTROOM WALL MOUNTED OCCUPANCY SENSOR.

DVO PROJECT – 191034

yes prep
PUBLIC SCHOOLS

2007 Ea architects

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No.	Description	Date
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YES PREP
PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST.
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POWER FLOOR PLAN

Project Number	17018
Date	03/01/19
Drawn By	KL
Checked By	JF

E102

Scale As Indicated

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ELECTRICAL LOAD ANALYSIS				EXISTING
YES PREP - NORTHSIDE CAMPUS				5215 JENSEN ST.
DVO ENGINEERING				HOUSTON, TX 77026

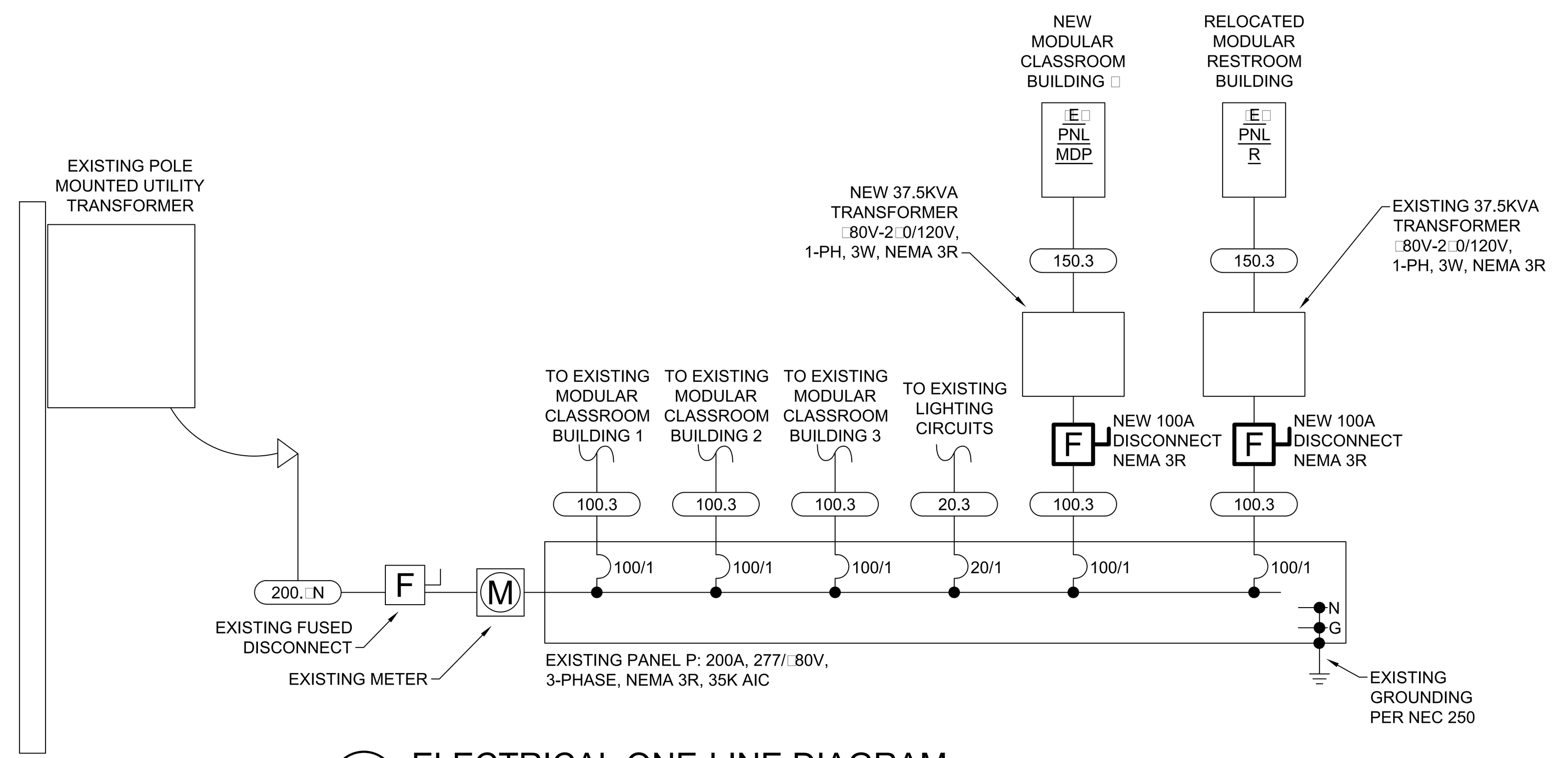
USE	SQFT	VOLTAGE	PHASE	
School	6530	480 / 277V	3	4W

NEW LOAD	DESIGN INFO	LOAD	NOTES AND CODE REFERENCES
LIGHTING			
INTERIOR LIGHTING	1.0 W/SF	18.4 KVA	220.12 EX#2 2015 IECC
T220.12 LOAD	6.5 KVA		
ACTUAL +25% CONT	18.4 KVA		
EXTERIOR LIGHTING		0.0 KVA	(CONNECTED LOAD)
+25% CONTINUOUS		0.0 KVA	
HVAC			220.60
ELECTRIC HEAT		131.2 KVA	220.51
COOLING			(NONCOINCIDENT LOAD) 220.60
RECEPTACLES	10.8 KVA		(CONNECTED LOAD)
< 10KVA AT 100%	10.0 KVA		220.14(I), OFFICE: 220.14(K)(1)OR(2)
REMAINDER AT 50%	0.4	10.4 KVA	220.14(I) (ACTUAL DEMAND)
OFFICE (220.14(K)(2))	0.0 KVA		(1 W/SF OFFICE/BANK ONLY)220.14(K)(2)
		10.4 KVA	(RECEPTACLE DEMAND LOAD)
MOTORS			430.24
MTRS, PUMPS AND FANS		0.0 KVA	(ACTUAL LOAD)
LARGEST MOTOR +25%		0.0 KVA	
MISCELLANEOUS			
APPLIANCES		0.0 KVA	
EQUIPMENT		5.1 KVA	
KITCHEN (DF) 1.00	0.0 KVA	0.0 KVA	220.56
OTHER		0.0 KVA	
TOTAL		165.1 KVA	
REQUIRED CAPACITY		199 AMP	
SERVICE CAPACITY		200 AMP	
SPARE CAPACITY		1 AMP	

FEEDER SCHEDULE

TAG	WIRE AND CONDUIT SIZE - 3Ø, 4W
100.3	□3-1 & 1-8GND□1-1/2"C
200.□	□□-3/0 & 1-6GND□2"C
200.□N	□□-3/0□2"C

ALL CONDUCTORS TO BE COPPER UNLESS OTHERWISE NOTED. FOR AMPACITIES GREATER THAN 100A ALUMINUM CONDUCTORS MAY BE SUBSTITUTED FOR COPPER CONDUCTORS. ELECTRICAL CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR RE-SIZING CONDUCTORS AND CONDUIT PER APPLICABLE NATIONAL ELECTRIC CODE ARTICLES.



01 ELECTRICAL ONE-LINE DIAGRAM

SCALE: NTS

NOTE: ALL ELECTRICAL INFORMATION SHOWN IS EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

ONE-LINE GENERAL NOTES:

A. A PERMANENTLY AFFIXED LABEL SHALL BE APPLIED WITH THE AVAILABLE FAULT CURRENT AT THE TIME OF THE CALCULATION. THE LABEL SHALL BE 2" X 3" IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. THIS LABEL SHALL ALSO INCLUDE THE DATE OF CALCULATION PER.
B. AVAILABLE UTILITY AIC NOT AVAILABLE AT TIME OF THIS SUBMITTAL, STARTING UTILITY AIC ASSUMES WORST CASE IMPEDANCE OF 1.70□ ON 150KVA POLE MOUNTED XFMR OF □8,983 AIC.
C. SHORT CIRCUIT RATING CALCULATED USING POINT TO POINT METHOD
D. CONDUIT TO BUILDINGS SHALL BE DIRECT BURIED □8" BELOW GRADE WITH WARNING TAPE. USE SCH □0 PVC BELOW GRADE AND RIGID GALVANIZED STEEL CONDUIT ABOVE GRADE, UNLESS NOTED OTHERWISE.
E. ALL OUTDOOR ELECTRICAL EQUIPMENT TO BE MOUNTED IN GALVANIZED, WEATHERPROOF, NEMA 3R ENCLOSURES.
F. SQUARE TAGS REFER TO FAULT CURRENT VALUES LOCATED ON THIS PAGE.
G. CIRCULAR TAGS REFER TO ONE-LINE GROUNDING NOTES.

EXISTING PANEL P

VOLTAGE: 277/480V/3P/4W — ENCLOSURE: NEMA 3R
ALUMINUM GROUND BUS — SHORT CIRCUIT: 35k AIC
SOLID ALUMINUM, 100% NEUTRAL BUS — BUS 225 AMPS — MOUNTING: SURFACE
BOLT ON BREAKERS — MCB 200 AMPS — FEED-THRU LUGS: NO

	VOLT AMPS	SERVING	CB NOTE	BRKR	CCT	A	B	C	CCT	BRKR	CB NOTE	SERVING	VOLT AMPS	
S	17630	Building 1	E	100	1	18198			2	20	E	Canopy Lighting	568	L
S	15815	|	E	|	3		16515		4	20	E	Parking Lighting	700	L
S	17630	Building 2	E	100	5			17980	6	20	E	Lighting Controller	350	L
S	15815	|	E	|	7	15815			8	20	E	Spare		
S	17630	Building 3	E	100	9		35260		10	**100**	**N**	**Building 4**	**17630**	**S**
S	15815	|	E	|	11			31630	12	**|**	**N**	**|**	**15815**	**S**
S	13098	Restroom Building	E	100	13	13098			14	20	E	Spare		
S	13314	|	E	|	15		13314		16	20	E	Spare		
		Spare	E	20	17				18	20	E	Spare		

PHASE CONNECTED LOAD (VA) 47111 65089 49610
PHASE DEMAND LOAD (VA) 710 875 438

		CONNECTED	D.F.	DEMAND
A	APPLIANCES	0.0	1.00	0.0
E	EQUIPMENT	5.1	1.00	5.1
H	HEATING	131.2	1.00	131.3
K	KITCHEN (220.56 #KIT. APPL.) NONE	0.0	1.00	0.0
L	LIGHTING	14.7	1.25	18.4
M	MOTORS	0.0	1.00	0.0
	LARGEST MOTOR	0.0	1.25	0.0
O	OTHER	0.0	1.00	0.0
R	RECEPTACLES (FIRST 10 KW)	10.0	1.00	10.0
	RECEPTACLES (REMAINDER)	0.8	0.50	0.4
S	SUBFEED PANEL	160.2	1.00	160.4

TOTAL CONNECTED LOAD:	161.8 KVA
	194.6 AMPS
DESIGN LOAD:	166.3 KVA
	200.0 AMPS
NEC DEMAND LOAD:	165.2 KVA
	198.7 AMPS
SPARE CAPACITY:	1.1 KVA
	1.3 AMPS
PHASE BALANCE A TO B:	72.4%
PHASE BALANCE B TO C:	76.2%
PHASE BALANCE C TO A:	95.0%

NOTES:
1. BRANCH CIRCUIT VOLTAGE DROP NOT TO EXCEED 3% AT FARTHEST OUTLET.
TOTAL VOLTAGE DROP INCLUDING FEEDERS AND BRANCH CIRCUITS NOT TO EXCEED 5%.
2. FIELD VERIFY EQUIPMENT LOADS.
3. ALL CONDUCTORS SHALL BE COPPER.
4.

CB NOTES: "N" - New , "E"- Existing, "R" - Revised Load "GFI": GFCI Breaker, "GFP" - Equipment Rated GFCI Breaker "L": Lockable

PANEL MDP - CLASSROOM

VOLTAGE: 120/240V/1P/3W — ENCLOSURE: NEMA 1
ALUMINUM GROUND BUS — SHORT CIRCUIT: 10k AIC
SOLID ALUMINUM, 100% NEUTRAL BUS — BUS 150 AMPS — MOUNTING: SURFACE
BOLT ON BREAKERS — MCB 150 AMPS — FEED-THRU LUGS: NO

	VOLT AMPS	SERVING	WIRE SIZE	BRKR	CCT	A	C	CCT	BRKR	WIRE SIZE	SERVING	VOLT AMPS	
L	1575	Lighting - CR 109	#12	20	1	2655		2	20	#12	Recepts	1080	R
L	1575	Lighting - CR 108	#12	20	3		1935	4	20	#12	Recepts - Exterior	360	R
L	**15**	**NEW Lighting - EM**	**#12**	**20**	5	1095		6	20	#12	Recepts	1080	R
		Space			7			8			Space		
		Space			9			10			Space		
		Space			11			12			Space		
		Space			13			14			Space		
		Space			15			16			Space		
		Space			17			18			Space		
H	6940	HVAC #1	#8	60	19		13880	20	60	#8	HVAC #2	6940	H
H	6940	|	#8	|	21	13880		22	|	#8	|	6940	H

PHASE CONNECTED LOAD (VA) 17630 15815
PHASE DEMAND LOAD (VA) 18041 16223

		CONNECTED	D.F.	DEMAND
A	APPLIANCES	0.0	1.00	0.0
E	EQUIPMENT	0.0	1.00	0.0
H	HEATING	27.8	1.00	27.8
K	KITCHEN	0.0	1.00	0.0
L	LIGHTING	3.2	1.25	4.0
M	MOTORS	0.0	1.00	0.0
	LARGEST MOTOR	0.0	1.25	0.0
O	OTHER	0.0	1.00	0.0
R	RECEPTACLES (FIRST 10 KW)	2.5	1.00	2.5
	RECEPTACLES (REMAINDER)	0.0	0.50	0.0
S	SUBFEED PANEL	0.0	1.00	0.0
T	TRANSFORMER	0.0	1.00	0.0

TOTAL CONNECTED LOAD:	33.4 KVA
	139.4 AMPS
DESIGN LOAD:	36.0 KVA
	150.0 AMPS
NEC DEMAND LOAD:	34.3 KVA
	142.8 AMPS
SPARE CAPACITY:	1.7 KVA
	7.2 AMPS
PHASE BALANCE A TO C:	89.7%
PHASE BALANCE C TO A:	89.7%

NOTES:
1. BRANCH CIRCUIT VOLTAGE DROP NOT TO EXCEED 3% AT FARTHEST OUTLET.
TOTAL VOLTAGE DROP INCLUDING FEEDERS AND BRANCH CIRCUITS NOT TO EXCEED 5%.
2. FIELD VERIFY EQUIPMENT LOADS.
3. ALL CONDUCTORS SHALL BE COPPER.
4 BOLD TEXT INDICATES NEW WORK ADDED TO THE MODULAR BUILDING

EXISTING PANEL R - RESTROOM

VOLTAGE: 120/240V/1P/3W — ENCLOSURE: NEMA 1
ALUMINUM GROUND BUS — SHORT CIRCUIT: 10k AIC
SOLID ALUMINUM, 100% NEUTRAL BUS — BUS 150 AMPS — MOUNTING: SURFACE
BOLT ON BREAKERS — MCB 150 AMPS — FEED-THRU LUGS: NO

	VOLT AMPS	SERVING	WIRE SIZE	BRKR	CCT	A	C	CCT	BRKR	WIRE SIZE	SERVING	VOLT AMPS	
L	408	Lighting	#12	20	1	768		2	20	#12	Recepts	360	R
E	624	EF's	#12	20	3		984	4	20	#12	Recepts	360	R
		Space			5			6			Space		
		Space			7			8			Space		
		Space			9	2250		10	30	#10	Water Heater	2250	E
		Space			11		2250	12	|	#10	|	2250	E
		Space			13			14			Space		
		Space			15			16			Space		
		Space			17			18			Space		
		Space			19			20			Space		
H	3120	HVAC		30	21	10080		22	60	#6	HVAC	6960	H
H	3120	|		|	23		10080	24	|	#6	|	6960	H

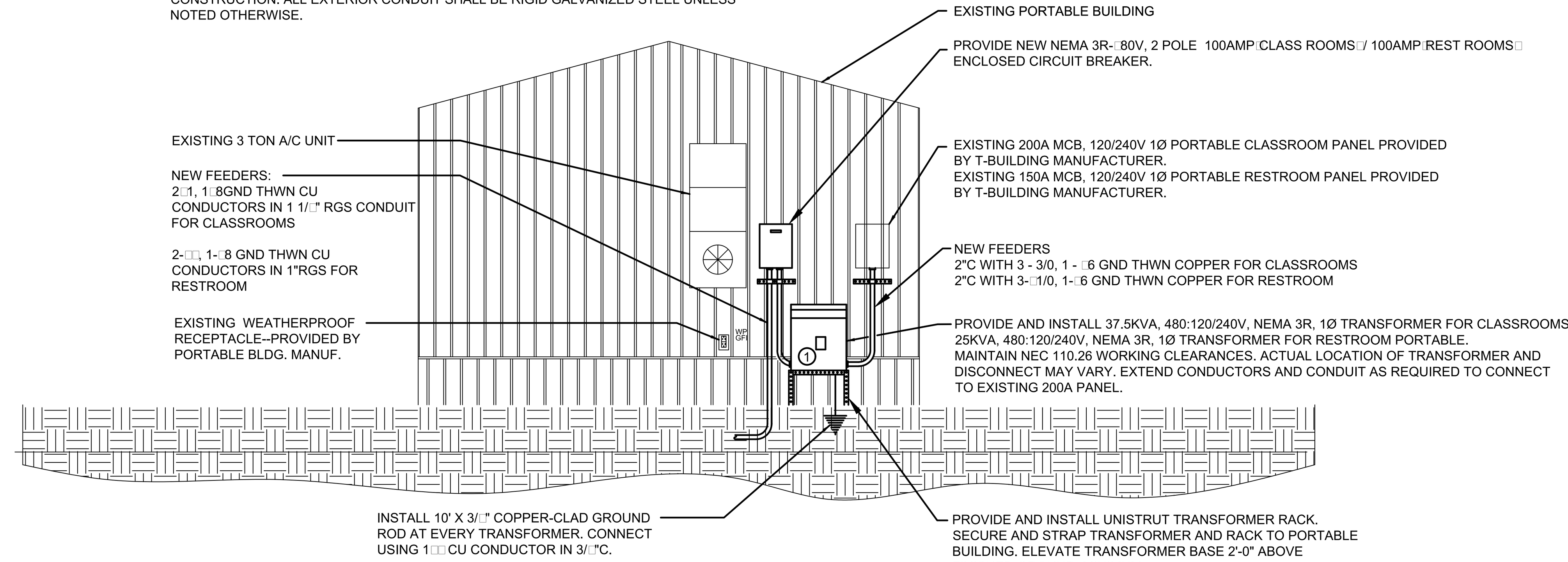
PHASE CONNECTED LOAD (VA) 13098 13314
PHASE DEMAND LOAD (VA) 13210 13324

		CONNECTED	D.F.	DEMAND
A	APPLIANCES	0.0	1.00	0.0
E	EQUIPMENT	5.1	1.00	5.1
H	HEATING	20.2	1.00	20.2
K	KITCHEN	0.0	1.00	0.0
L	LIGHTING	0.4	1.25	0.5
M	MOTORS	0.0	1.00	0.0
	LARGEST MOTOR	0.0	1.25	0.0
O	OTHER	0.0	1.00	0.0
R	RECEPTACLES (FIRST 10 KW)	0.7	1.00	0.7
	RECEPTACLES (REMAINDER)	0.0	0.50	0.0
S	SUBFEED PANEL	0.0	1.00	0.0
T	TRANSFORMER	0.0	1.00	0.0

TOTAL CONNECTED LOAD:	26.4 KVA
	110.1 AMPS
DESIGN LOAD:	36.0 KVA
	150.0 AMPS
NEC DEMAND LOAD:	26.5 KVA
	110.6 AMPS
SPARE CAPACITY:	9.5 KVA
	39.4 AMPS
PHASE BALANCE A TO C:	98.4%
PHASE BALANCE C TO A:	98.4%

NOTES:
1. BRANCH CIRCUIT VOLTAGE DROP NOT TO EXCEED 3% AT FARTHEST OUTLET.
TOTAL VOLTAGE DROP INCLUDING FEEDERS AND BRANCH CIRCUITS NOT TO EXCEED 5%.
2. FIELD VERIFY EQUIPMENT LOADS.
3. ALL CONDUCTORS SHALL BE COPPER.
4 BOLD TEXT INDICATES NEW WORK ADDED TO THE MODULAR BUILDING

NOTE: EQUIPMENT SHOWN AS EXISTING IS PROVIDED BY TEMPORARY BUILDING MANUFACTURER AND IS SHOWN FOR INFORMATION PURPOSES ONLY. EXACT EQUIPMENT LOCATIONS MAY VARY FROM LOCATIONS SHOWN AND DEMONSTRATES DESIGN INTENT ONLY. CONTRACTOR SHALL COORDINATE EQUIPMENT LOCATIONS WITH BUILDING MANUFACTURER PRIOR TO CONSTRUCTION. ALL EXTERIOR CONDUIT SHALL BE RIGID GALVANIZED STEEL UNLESS NOTED OTHERWISE.



NOTE:
① CONTRACTOR SHALL PROVIDE FENCING AROUND TRANSFORMER LOCATED IN AREAS EXPOSED TO PUBLIC ACCESS. REFER TO ARCHITECTURAL DWGS. FOR DETAILS.

02 TYPICAL MODULAR ELEVATION DETAIL

SCALE: NTS

DVO PROJECT – 191034

yes prep PUBLIC SCHOOLS

2007 Ea architects

STATE OF TEXAS — JASON W. DAWSON — 108125 — LICENSED PROFESSIONAL ENGINEER

DVO
825 TOWN & COUNTRY LANE
STE 1150
HOUSTON, TX 77024
(281) 293 - 7500
WWW.DVOENG.COM
REGISTRATION NO. F-8334

No.	Description	Date
	ISSUE FOR PRICING / PERMIT	03/01/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

ELECTRICAL SCHEDULES + DETAILS

Project Number	17018
Date	03/01/19
Drawn By	KL
Checked By	JF

E201

Scale: As Indicated

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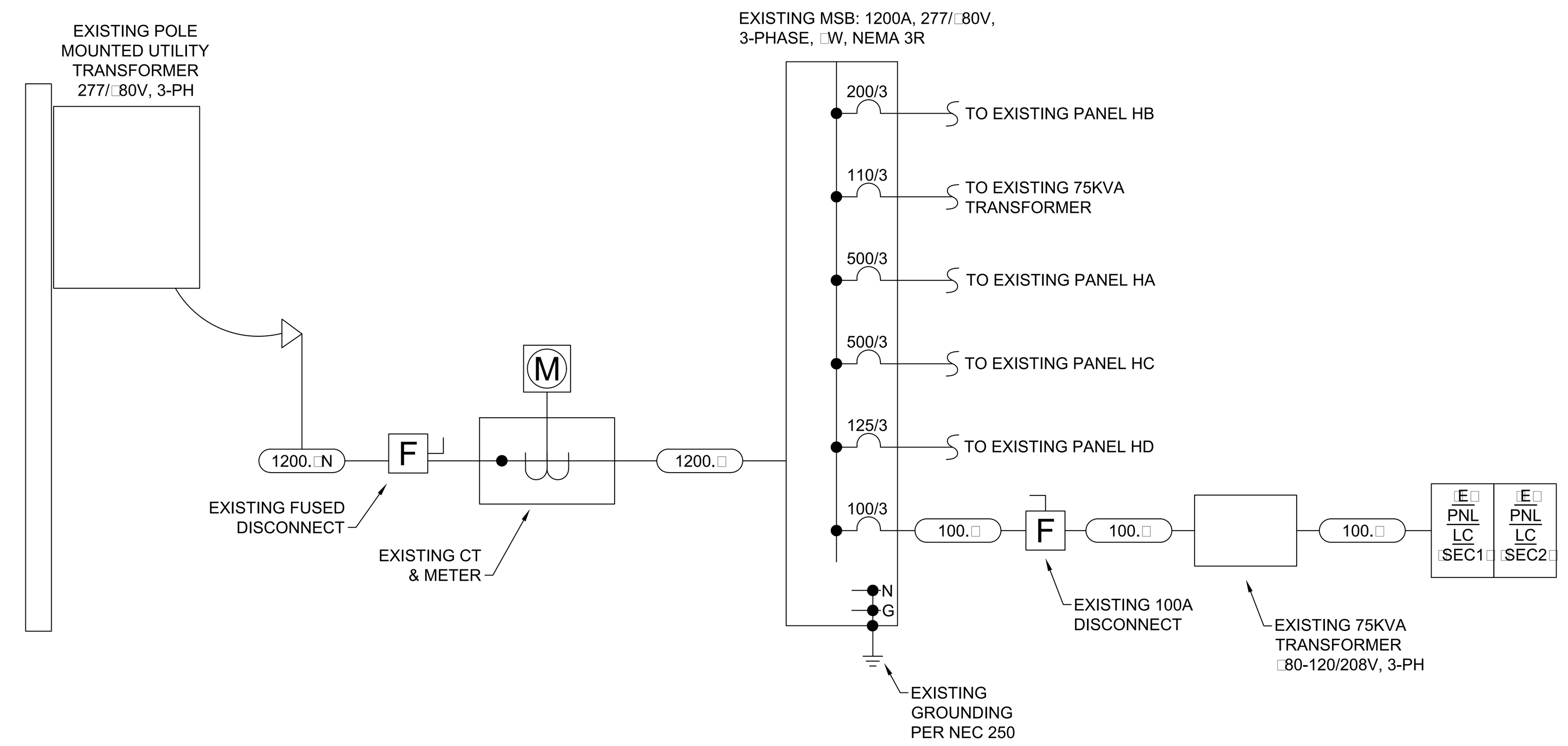

01 ELECTRICAL ONE-LINE DIAGRAM - LEGACY CLINIC

SCALE: NTS

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

FEEDER SCHEDULE

TAG	WIRE AND CONDUIT SIZE - 3Ø, 4W
100.□	□□-1 & 1-8GND□1-1/2"C
1200.□	□□□-350KCMIL & 1-3/0GND□3"C□
1200.□N	□□□-350KCMIL□3"C□

ALL CONDUCTORS TO BE COPPER UNLESS OTHERWISE NOTED. FOR AMPACITIES GREATER THAN 100A ALUMINUM CONDUCTORS MAY BE SUBSTITUTED FOR COPPER CONDUCTORS. ELECTRICAL CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR RE-SIZING CONDUCTORS AND CONDUIT PER APPLICABLE NATIONAL ELECTRIC CODE ARTICLES.

ONE-LINE GENERAL NOTES:

A. A PERMANENTLY AFFIXED LABEL SHALL BE APPLIED WITH THE AVAILABLE FAULT CURRENT AT THE TIME OF THE CALCULATION. THE LABEL SHALL BE 2" X 3" IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. THIS LABEL SHALL ALSO INCLUDE THE DATE OF CALCULATION PER.
B. AVAILABLE UTILITY AIC NOT AVAILABLE AT TIME OF THIS SUBMITTAL, STARTING UTILITY AIC ASSUMES WORST CASE IMPEDANCE OF 1.70□ ON 150KVA POLE MOUNTED XFMR OF □8,983 AIC.
C. SHORT CIRCUIT RATING CALCULATED USING POINT TO POINT METHOD
D. CONDUIT TO BUILDINGS SHALL BE DIRECT BURIED □8" BELOW GRADE WITH WARNING TAPE. USE SCH □0 PVC BELOW GRADE AND RIGID GALVANIZED STEEL CONDUIT ABOVE GRADE, UNLESS NOTED OTHERWISE.
E. ALL OUTDOOR ELECTRICAL EQUIPMENT TO BE MOUNTED IN GALVANIZED, WEATHERPROOF, NEMA 3R ENCLOSURES.
F. SQUARE TAGS REFER TO FAULT CURRENT VALUES LOCATED ON THIS PAGE.
G. CIRCULAR TAGS REFER TO ONE-LINE GROUNDING NOTES.

ELECTRICAL LOAD ANALYSIS

YES PREP: LEGACY CLINIC — EXISTING
DVO ENGINEERING — 5215 JENSEN ST.
SUBMITTAL DATE — HOUSTON, TX77026

USE	SQFT	VOLTAGE	PHASE	
School	52000	480 / 277V	3	4W

EXISTING LOAD	DESIGN INFO	LOAD	NEC CODE REFERENCE
EXISTING LOAD			PER SIGNED AND STAMPED DRAWINGS
EXISTING KVA		921 KVA	DATED 01/15/13

NEW LOAD	DESIGN INFO	LOAD	NOTES AND CODE REFERENCES
RECEPTACLES	1.6 KVA		(CONNECTED LOAD)
< 10KVA AT 100%	1.6 KVA		220.14(I), OFFICE: 220.14(K)(1)OR(2)
REMAINDER AT 50%		1.6 KVA	220.14(I) (ACTUAL DEMAND)
		1.6 KVA	(RECEPTACLE DEMAND LOAD)
MISCELLANEOUS			
APPLIANCES		0.0 KVA	
EQUIPMENT		0.0 KVA	
KITCHEN (DF) 1.00	1.8 KVA	1.8 KVA	220.56
OTHER		0.0 KVA	
TOTAL		924.4 KVA	

REQUIRED CAPACITY	1112 AMP
SERVICE CAPACITY	1200 AMP
SPARE CAPACITY	88 AMP

(E)PANEL LC, SEC 1

VOLTAGE: 120/208V/3P/4W
ALUMINUM GROUND BUS — ENCLOSURE: NEMA 1
SOLID ALUMINUM, 100% NEUTRAL BUS — BUS 225 AMPS — SHORT CIRCUIT: 10k AIC
BOLT ON BREAKERS — MCB 225 AMPS — MOUNTING: SURFACE
FEED-THRU LUGS: NO

	VOLT AMPS	SERVING	CB NOTE	BRKR	CCT	A	B	C	CCT	BRKR	CB NOTE	SERVING	VOLT AMPS	
E	1200	(E)Projector	E	20	1	2000			2	20	E	(E)Recepts - Computer	800	R
E	1200	(E)Projector	E	20	3		1200		4	20	E	(E)Spare		
E	1200	(E)Projector	E	20	5			2100	6	20	E	(E)Recepts	900	R
R	800	(E)Recepts - Computer	E	20	7	1340			8	20	E	(E)Recepts	540	R
		(E)Spare	E	20	9		1500		10	20	E	(E)Refrigerator	1500	K
R	800	(E)Recepts - Computer	E	20	11			1000	12	20	E	(E)Recepts - Computer	200	R
R	800	(E)Recepts - Computer	E	20	13	1600			14	20	E	(E)EWC	800	E
E	800	(E)EWC	E	20	15		980		16	20	E	(E)Recepts	180	R
R	180	(E)Recept	E	20	17			360	18	20	E	(E)Recepts	180	R
M	1300	(E)EF-4	E	20	19	2600			20	20	E	(E)EF-5	1300	M
E	1200	(E)Score Board	E	20	21		1200		22	20	E	(E)Spare		
R	1260	(E)Recepts	E	20	23			2060	24	20	E	(E)Recepts - Computer	800	R
E	1000	(E)Projector	E	20	25	1800			26	20	E	(E)Recepts - Computer	800	R
E	1000	(E)Projector	E	20	27		1800		28	20	E	(E)Recepts - Computer	800	R
E	1000	(E)Projector	E	20	29			1800	30	20	E	(E)Recepts - Computer	800	R
E	1000	(E)Projector	E	20	31	1800			32	20	E	(E)Recepts - Computer	800	R
E	1000	(E)Projector	E	20	33		1800		34	20	E	(E)Recepts - Computer	800	R
R	1080	(E)Recepts	E	20	35			1440	36	20	E	(E)Recepts	360	R
R	180	(E)Recepts	E	20	37	1080			38	20	E	(E)Recepts	900	R
R	**900**	**Recepts - Legacy 225**	**E,R**	**20**	39		900		40	20	E	(E)Spare		
		(E)Spare	E	20	41				42	20	E	(E)Spare		

	A	B	C
PHASE CONNECTED LOAD (VA)	12220	9380	8760
PHASE DEMAND LOAD (VA)	12870	9230	8760

		CONNECTED	D.F.	DEMAND
A	APPLIANCES	0.0	1.00	0.0
E	EQUIPMENT	15.9	1.00	15.9
H	HEATING	0.0	1.00	0.0
K	KITCHEN (220.56 #KIT. APPL.) 3	3.3	0.90	3.0
L	LIGHTING	0.0	1.25	0.0
M	MOTORS	1.3	1.00	1.3
	LARGEST MOTOR	1.3	1.25	1.6
O	OTHER	0.0	1.00	0.0
R	RECEPTACLES (FIRST 10 KW)	10.0	1.00	10.0
	RECEPTACLES (REMAINDER)	10.0	0.50	5.0
S	SUBFEED PANEL	0.0	1.00	0.0

TOTAL CONNECTED LOAD:	30.4 KVA
	84.3 AMPS
DESIGN LOAD:	81.1 KVA
	225.0 AMPS
NEC DEMAND LOAD:	36.8 KVA
	102.0 AMPS
SPARE CAPACITY:	44.3 KVA
	123.0 AMPS
PHASE BALANCE A TO B:	76.8%
PHASE BALANCE B TO C:	93.4%
PHASE BALANCE C TO A:	71.7%

CONNECTED LOAD INCLUDES SEC 1 & 2

NOTES:
1. BRANCH CIRCUIT VOLTAGE DROP NOT TO EXCEED 3% AT FARTHEST OUTLET. TOTAL VOLTAGE DROP INCLUDING FEEDERS AND BRANCH CIRCUITS NOT TO EXCEED 5%.
2. FIELD VERIFY EQUIPMENT LOADS.
3. ALL CONDUCTORS SHALL BE COPPER.
4. **BOLD TEXT INDECATES NEW WORK.**

CB NOTES: "N" - New , "E"- Existing, "R" - Revised Load "GFI": GFCI Breaker, "GFP" - Equipment Rated GFCI Breaker "L": Lockable

(E)PANEL LC, SEC 2

VOLTAGE: 120/208V/3P/4W
ALUMINUM GROUND BUS — ENCLOSURE: NEMA 1
SOLID ALUMINUM, 100% NEUTRAL BUS — BUS 225 AMPS — SHORT CIRCUIT: 10k AIC
BOLT ON BREAKERS — MCB 225 AMPS — MOUNTING: SURFACE
FEED-THRU LUGS: NO

	VOLT AMPS	SERVING	CB NOTE	BRKR	CCT	A	B	C	CCT	BRKR	CB NOTE	SERVING	VOLT AMPS	
R	800	(E)Recepts - Computer	E	20	43	1400			44	20	E	(E)EWH	600	E
R	400	(E)Recepts - Computer	E	20	45		1200		46	20	E	(E)Recepts - Computer	800	R
R	1080	(E)Recepts	E	20	47			1680	48	20	E	(E)Recepts - Computer	600	R
R	720	(E)Recepts	E	20	49	720			50	20	E	(E)Gate		
E	1000	(E)Gate	E	20	51		1720		52	**20**	**N**	**Recepts - Lab 225**	**720**	**R**
		(E)Spare	E	20	53			900	54	**20**	**N,GFI**	**Refrigerator Lab225**	**900**	**K**
		(E)Spare	E	20	55	900			56	**20**	**N,GFI**	**Freezer Lab225**	**900**	**K**
		(E)Space	E		57		1440		58	**20**	**N**	**IWH-1**	**1440**	**E**
		(E)Space	E		59			1440	60	**20**	**N**	**IWH-2**	**1440**	**E**
		(E)Space	E		61				62		E	(E)Space		
		(E)Space	E		63				64		E	(E)Space		
		(E)Space	E		65				66		E	(E)Space		
		(E)Space	E		67				68		E	(E)Space		
		(E)Space	E		69				70		E	(E)Space		
		(E)Space	E		71				72		E	(E)Space		
		(E)Space	E		73				74		E	(E)Space		
		(E)Space	E		75				76		E	(E)Space		
		(E)Space	E		77				78		E	(E)Space		
		(E)Space	E		79				80		E	(E)Space		
		(E)Space	E		81				82		E	(E)Space		
		(E)Space	E		83				42		E	(E)Space		

	A	B	C
PHASE CONNECTED LOAD (VA)	3020	4360	4020
PHASE DEMAND LOAD (VA)	3020	4360	4020

		CONNECTED	D.F.	DEMAND
A	APPLIANCES	0.0	1.00	0.0
E	EQUIPMENT	4.5	1.00	4.5
H	HEATING	0.0	1.00	0.0
K	KITCHEN (220.56 #KIT. APPL.) 2	1.8	1.00	1.8
L	LIGHTING	0.0	1.25	0.0
M	MOTORS	0.0	1.00	0.0
	LARGEST MOTOR	0.0	1.25	0.0
O	OTHER	0.0	1.00	0.0
R	RECEPTACLES (FIRST 10 KW)	5.1	1.00	5.1
	RECEPTACLES (REMAINDER)	0.0	0.50	0.0
S	SUBFEED PANEL	0.0	1.00	0.0

TOTAL CONNECTED LOAD:	11.4 KVA
	31.6 AMPS
DESIGN LOAD:	81.1 KVA
	225.0 AMPS
NEC DEMAND LOAD:	11.4 KVA
	31.6 AMPS
SPARE CAPACITY:	69.7 KVA
	193.4 AMPS
PHASE BALANCE A TO B:	69.3%
PHASE BALANCE B TO C:	92.2%
PHASE BALANCE C TO A:	75.1%

NOTES:
1. BRANCH CIRCUIT VOLTAGE DROP NOT TO EXCEED 3% AT FARTHEST OUTLET. TOTAL VOLTAGE DROP INCLUDING FEEDERS AND BRANCH CIRCUITS NOT TO EXCEED 5%.
2. FIELD VERIFY EQUIPMENT LOADS.
3. ALL CONDUCTORS SHALL BE COPPER.
4. **BOLD TEXT INDECATES NEW WORK.**

CB NOTES: "N" - New , "E"- Existing, "R" - Revised Load "GFI": GFCI Breaker, "GFP" - Equipment Rated GFCI Breaker "L": Lockable

DVO PROJECT – 191034

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yes prep PUBLIC SCHOOLS

STATE OF TEXAS
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No.	Description	Date
	ISSUE FOR PRICING / PERMIT	03/01/19

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PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

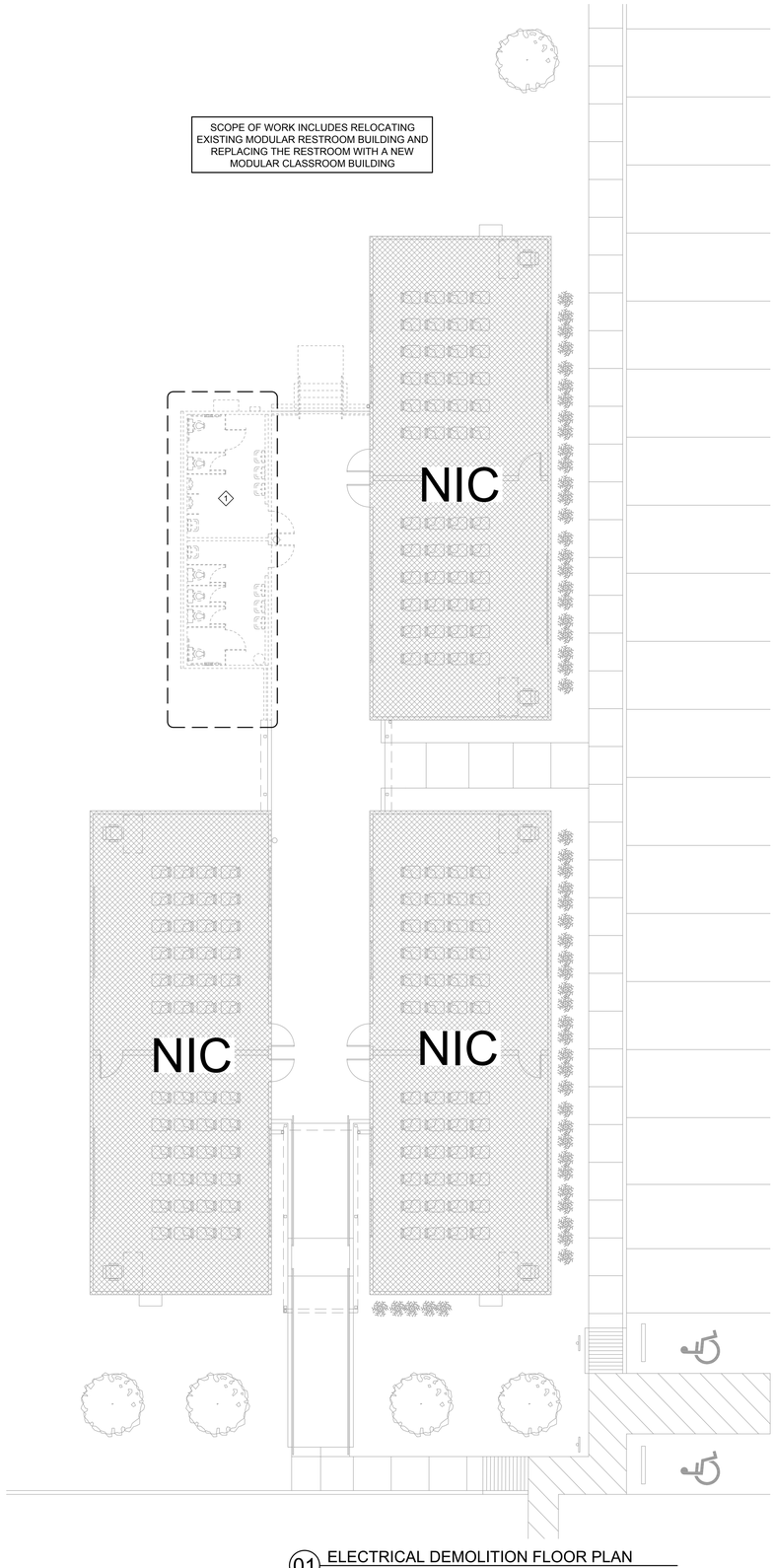
5215 JENSEN ST.
HOUSTON, TX 77026

ELECTRICAL SCHEDULES + DETAILS

Project Number	17018
Date	03/01/19
Drawn By	KL
Checked By	JF

E202

Scale — As Indicated



01 ELECTRICAL DEMOLITION FLOOR PLAN
SCALE: 1/8"=1'-0"

GENERAL DEMOLITION NOTES:

A. COORDINATE ALL WORK WITH OTHER TRADES, ARCHITECT, CLIENT, GENERAL CONTRACTOR AND OWNER.

B. ELECTRICAL CONTRACTOR SHALL VERIFY THE SCOPE OF DEMOLITION WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS. EXISTING LIGHT FIXTURES, ELECTRICAL DEVICES, EQUIPMENT, AND OTHER RELATED ITEMS SHALL BE CAREFULLY REMOVED, AS REQUIRED, FOR THE WORK UNDER THIS CONTRACT. THESE ITEMS SHALL BE, PROTECTED FROM DAMAGE, LABELED AND/OR STORED FOR FUTURE USE OR DISPOSAL AS DIRECTED BY THE BUILDING MANAGEMENT/OWNER, ARCHITECT OR ENGINEER.

C. EXISTING LIGHT FIXTURES, NOTED ON ELECTRICAL DRAWINGS TO BE RE-USED, SHALL BE CLEANED THOROUGHLY AND/OR REFINISHED TO AS NEW CONDITION.

D. CONTRACTOR SHALL REMOVE ELECTRICAL EQUIPMENT, ELECTRICAL DEVICE DEVICES AND TELECOMMUNICATIONS OUTLETS SCHEDULED FOR DEMOLITION. ALL UNUSED WIRING SHALL BE REMOVED BACK TO JUNCTION BOX ES. IN CEILING SPACE OR TO ELECTRICAL PANEL FEEDING THE CIRCUIT.

E. ALL SPARE OR UNUSED CIRCUIT BREAKERS SHALL BE SWITCHED TO THE "OFF" POSITION AND NOTED ON PANEL DIRECTORY AS "SPARE" WITH JUNCTION BOX LOCATION IF APPLICABLE.

F. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING CIRCUIT AMPACITY FOR ALL EXISTING CIRCUITS IMPACTED BY THIS PROJECT TO ENSURE CIRCUIT CONTINUITY AND TO PREVENT OVERLOADING CIRCUIT S.; CONTRACTOR SHALL ENSURE THAT CIRCUITS SHARED BETWEEN PROJECT AREA AND EXISTING TENANT SPACES REMAIN INTACT PER ORIGINAL DESIGN INTENT. CORRECTLY LABEL ALL J-BOX COVERS WITH ACCURATE PANEL AND BRANCH CIRCUIT INFORMATION.

G. PROVIDE NEW JUNCTION BOXES, NEW CONDUIT AND WIRING AS REQUIRED FOR CIRCUIT S. IMPACTED BY PROJECT SCOPE.

H. LOCATIONS OF EXISTING AND DEMOLISHED LIGHT FIXTURES, POWER DEVICES, ELECTRICAL EQUIPMENT, WIRING, ETC., SHOWN ON ELECTRICAL DRAWINGS HAS BEEN TAKEN FROM EXISTING DRAWINGS. ALL EXISTING CONDITIONS SHALL BE VERIFIED IN THE FIELD BY ELECTRICAL CONTRACTOR. DOCUMENT SIGNIFICANT DISCREPANCIES TO EXISTING FIELD CONDITIONS AND MAKE ANY NECESSARY ADJUSTMENTS TO ELECTRICAL DRAWINGS .

I. IF EXISTING FLOOR MOUNTED POKE-THRU OR FLOOR BOXES DEVICES ARE BEING ABANDONED, REMOVE EXISTING DEVICES, CONDUIT, AND ASSOCIATED WIRING BACK TO POINT OF ORIGIN. MAINTAIN CIRCUIT CONTINUITY FOR ANY AFFECTED DEVICES. PROVIDE A FIRE-RATED PLUG AND FLUSH ABANDONMENT KIT. COORDINATE SCHEDULE WITH BUILDING MANAGEMENT TO INFORM TENANT BELOW PRIOR TO BEGINNING OF DEMOLITION WORK.

J. ELECTRICAL CONTRACTOR SHALL COORDINATE REMOVAL OR RELOCATION OF ANY PLUMBING, MECHANICAL EQUIPMENT OR ADDITIONAL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS IN PROJECT SCOPE. REWORK EXISTING BRANCH CIRCUIT S. WIRING AND EXTEND TO NEW EQUIPMENT LOCATION AND RECONNECT EQUIPMENT AS EXISTING. RETAIN CIRCUIT CONTINUITY FOR EXISTING EQUIPMENT TO REMAIN IF REQUIRED.

KEYED POWER NOTES:

1. EXISTING MODULAR RESTROOM BUILDING TO BE RELOCATED ABOUT 25' NORTH. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION WITH CLIENT AND ARCHITECT PRIOR TO BEGINNING ANY WORK. RELOCATE ALL EXISTING CONNECTIONS TO NEW LOCATION. PROVIDE JUNCTION BOXES, CONDUITS, CONDUCTORS, POWER PACKS OR ANY ADDITIONAL ELECTRICAL EQUIPMENT REQUIRED TO REWORK/EXTEND EXISTING WIRING.

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PUBLIC SCHOOLS

2007 Ea architects

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ELECTRICAL DEMOLITION FLOOR PLAN

Project Number	17018
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ED101

Scale As Indicated

DVO PROJECT – 191034

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PLUMBING SYMBOLS AND ABBREVIATIONS

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED HERE ARE USED IN THE DRAWINGS AND MAY NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE DRAWINGS.

PLUMBING ABBREVIATIONS

AB	ABOVE
ACC	ACCESS
ADJ.	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX.	APPROXIMATELY
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
AVG	AVERAGE
BFF	BELOW FINISHED FLOOR
BLDG	BUILDING
BOT	BOTTOM
BOP	BOTTOM OF PIPE
BT	BATHTUB
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
BTW	BETWEEN
CAP	CEILING ACCESS PANEL
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFH	CUBIC FEET PER MINUTE
CFM	CUBIC FEET PER HOUR
CL	CENTERLINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COND	CONDUCTOR
CONT	CONTRACTOR
COP	COEFFICIENT OF PERFORMANCE
CTR	CENTER
CU	COPPER
CW	COLD WATER
CWFU	COLD WATER FIXTURE UNITS
DD	DRAIN DECK
DEG	DEGREES
DET	DETAIL
DFU	DRAINAGE FIXTURE UNITS
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DS	DOWNSPOUT
DT	DRAIN TILE
DWG.	DRAWING
E	EXISTING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EEW	EMERGENCY EYEWASH
EFF.	EFFICIENCY
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION
EM	EMERGENCY
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXP	EXPANSION
EXST	EXISTING
EXT	EXTERIOR
F	FUTURE
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FLA	FULL LOAD AMPS
FLR	FLOOR
FM	FACTORY MUTUAL
FP	FIREPROOF
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
F&T	FLOAT AND THERMOSTATIC
FT	FEET
FTG	FOOTING
FU	FIXTURE UNITS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GPH	GALLONS PER HOUR
HB	HOSE BIBB
HD	HUB DRAIN
HP	HORSE POWER
H.P.	HIGH POINT
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HW	HOT WATER
HWFU	HOT WATER FIXTURE UNITS
HWR	HOT WATER RETURN
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCHES
KO	KNOCK-OUT
L	LAVATORY
LBS.Q.	POUNDS
LB/HR	POUNDS PER HOUR
L.F.	LINEAR FEET
LP	LOW POINT
LTG	LIGHTING
LWT	LEAVING WATER TEMPERATURE

MAX	MAXIMUM
MB	MOP BASIN
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MEP	MECHANICAL, ELECTRICAL AND PIPING
MER	MECHANICAL EQUIPMENT ROOM
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MIN.	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
MTG	MOUNTING
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NPS	NOMINAL PIPE SIZE
NPSH	NET POSITIVE SUCTION HEAD
NPT	NATIONAL PIPE THREAD
NR	NEAR
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OLP	OVERLOAD PROTECTION
OV	OUTLET VELOCITY
P	PUMP
PC	PLUMBING CONTRACTOR
PCF	POUNDS PER CUBIC FOOT
PD	PRESSURE DROP
PH	PHASE
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
POC	POINT OF CONNECTION
PP	POLYPROPYLENE
PPH	POUNDS PER HOUR
PRV	PRESSURE RELIEF VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REC	RECESSED
RECPT	RECEPTACLE
REQD	REQUIRED
RF	ROOF
RI	ROUGH-IN
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE VALVE
RV	RELIEF VALVE
S	SLOPE
SCH	SCHEDULE
SDR	STANDARD DIMENSION RATIO
SH	SHOWER
SHT	SHEET
SOG	SLAB ON GRADE
SPEC	SPECIFICATION
SQ	SQUARE
SS	SERVICE SINK
S/S	STAINLESS STEEL
STD	STANDARD
STRU	STRUCTURAL
T&P	TEMPERATURE AND PRESSURE
TBR	TO BE REMOVED
TD	TRENCH DRAIN
TDFU	TOTAL DRAIN FIXTURE UNITS
TEMP	TEMPERATURE
TOB	TOP OF BEAM
TOD	TOP OF DUCT/DECK
TOJ	TOP OF JOIST
TOP	TOP OF PIPE
TOS	TOP OF SLAB
T STAT	THERMOSTAT
TWFU	TOTAL WATER FIXTURE UNITS
TYP	TYPICAL
UNO	UNLESS OTHERWISE NOTED
V	VENT
VEL	VELOCITY
VIB	VALVE IN BOX
VOL	VOLUME
W	WIDTH
W/	WITH
W/O	WITHOUT
WC	WATER COLUMN
WSFU	WATER SUPPLY FIXTURE UNITS
WG	WATER GAUGE

PIPING SYSTEMS LABELS

WATER PIPING SYSTEMS:

SCW	COLD SOFT WATER
	COLD WATER
F	FIRE PROTECTION
	HOT WATER
	HOT WATER RETURN
NPW	NON-POTABLE WATER
TW	TEMPERED WATER
RO	REVERSE OSMOSIS WATER

GAS AND AIR PIPING SYSTEMS:

A	COMPRESSED AIR
H2	HYDROGEN
G	NATURAL GAS
N2	NITROGEN
VAC	VACUUM □AIR□

WASTE AND VENT SYSTEMS:

CD	CONDENSATE DRAIN
CWV	CLEARWATER VENT
CWW	CLEARWATER WASTE
FM	FORCE MAIN
IW	INDIRECT WASTE
OD	OVERFLOW DRAIN LINE
ST	STORM
SSD	SUBSOIL DRAIN LINE
	UNDERFLOOR FOR WASTE OR SOIL, SUBSOIL, STORM & FORCE MAIN
V	VENT
SAN	WASTE OR SOIL LINE

NOTE:
□E□ PRIOR TO SYSTEM TYPE DENOTES EXISTING PIPING
□F□ PRIOR TO SYSTEM TYPE DENOTES FUTURE PIPING

SITE PIPING SYSTEMS:

F	FIRE MAIN
FM	FORCE MAIN
SAN	SANITARY SEWER
ST	STORM SEWER
W	WATER LINE

PIPE FITTINGS

- FLANGE
- UNION
- ANCHOR
- PIPE GUIDE
- ECCENTRIC REDUCER
- CONCENTRIC REDUCER
- TEE BRANCH
- LINE CONTINUATION BREAK
- PLUMBING FIXTURE STOPS
- PIPELINE STRAINER
- ELBOW DOWN
- ELBOW UP
- TEE DOWN
- TEE UP
- PIPE CAP
- VALVE IN VERTICAL
- DOUBLE WYE
- WYE
- WYE WITH VENT UP

DRAINS AND CLEANOUTS

- FLOOR DRAIN
- FLOOR SINK
- HUB DRAIN
- FLOOR SINK
- FIXTURE WASTE TRAP
- CO — CLEANOUT
- FCO — FLOOR CLEANOUT
- GCO — GROUND CLEANOUT
- DCO — DOUBLE CLEANOUT

PIPING VALVES AND SPECIALTIES

- ANGLE VALVE
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- DIAPHRAGM VALVE
- DRAIN VALVE
- FLOAT OPERATED VALVE
- GAS SHUTOFF VALVE
- GATE VALVE
- GLOBE VALVE
- PLUG VALVE
- PIV — POST INDICATOR VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- QUICK OPENING VALVE
- SHUTOFF VALVE
- SOLENOID VALVE
- TRIPLE DUTY VALVE
- 2-WAY CONTROL VALVE □VALVE BODY AS SPECIFIED□
- 3-WAY MIXING VALVE
- □-WAY VALVE WITH ARROW INDICATING FAIL POSITION
- VALVE IN BOX
- AIR VENT, AUTOMATIC
- MV — AIR VENT, MANUAL
- BACKFLOW PREVENTER
- CONSTANT FLOW REGULATOR
- DEMOLITION OF PIPING, DEVICE, ETC.
- DIRECTION OF FLOW
- R — DIRECTION OF PITCH RISE □R□ OR DROP □D□
- DRAIN PLUG
- EJ — EXPANSION JOINT
- FLEXIBLE CONNECTION
- FS — FLOW SWITCH
- FM — FLOW SENSING DEVICE
- GAS REGULATOR
- GAS OUTLET
- HOSE BIBB
- PETE'S PLUG
- PRESSURE GAUGE
- PS — PRESSURE SWITCH
- XX — STEAM TRAP
- THERMOMETER
- WH — WALL HYDRANT
- WATER HAMMER ARRESTOR

PLUMBING MATERIALS

COLD WATER PIPING □UNDERGROUND□	COPPER TYPE "K"
COLD WATER PIPING □ABOVE GROUND□	COPPER TYPE "L"
HOT WATER PIPING	COPPER TYPE "L"
SANITARY SEWER □UNDER GROUND□	SCHEDULE □0 DWV PVC
SANITARY SEWER □ABOVE GROUND - PLENUM RETURN□	HUBLESS CAST IRON
SANITARY SEWER □ABOVE GROUND - DUCTED RETURN□	SCHEDULE □0 DWV PVC
SANITARY VENT □PLENUM RETURN□	HUBLESS CAST IRON
SANITARY VENT □DUCTED RETURN□	SCHEDULE □0 DWV PVC

PLUMBING FIXTURES MUST MEET WATER SAVINGS STANDARDS AS REQUIRED BY ANSI, CITY CODE AND SPECIFICATIONS.

WATER CLOSET	2" VENT, □" WASTE, 1-1/□" COLD WATER
URINAL	2" VENT, 3" WASTE, 1-1/□" COLD WATER
LAVATORY	2" VENT, 2" WASTE, 3/□" HOT & COLD WATER
SINK	2" VENT, 2" WASTE, 3/□" HOT & COLD WATER
KITCHEN SINK	2" VENT, 2" WASTE, 3/□" HOT & COLD WATER
DISH WASHER	WASTE TO K SINK, 3/□" HOT & COLD WATER
FLOOR DRAIN	2" VENT, 3" WASTE,
MOP SINK	2" VENT, 3" WASTE, 3/□" HOT & COLD WATER

MINIMUM PIPE SIZE TO TAIL PIECE IS 3/□".

GENERAL NOTES

A. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER AND AND SHALL COMPLY WITH ALL ADOPTED LOCAL, STATE, AND NATIONAL CODES.

B. DO NOT SCALE THE DRAWINGS.

C. FIELD VERIFY EXACT LOCATION OF ALL CONNECTION POINTS PRIOR TO CONSTRUCTION.

D. CONTRACTOR SHALL INSPECT SITE THOROUGHLY TO FAMILIARIZE THEMSELVES WITH THE AREA OF WORK. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND ACTUAL CONDITIONS SHALL BE REPORTED TO THE ARCHICTECT/ENGINEER FOR RESOLUTIONS PRIOR TO BID PRICING. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF EXISTING OR NEW CONDITIONS.

E. PROVIDE BALL VALVES ON ALL BRANCH LINES FOR BUILDING ISOLATION WHETHER SHOWN OR NOT.

F. OFFSET ALL PIPING AS REQUIRED TO AVOID STRUCTURAL MEMBERS, CANTS, FLASHING, MECHANICAL OR ELECTRICAL EQUIPMENT.

G. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF EXISTING WASTE, DIRECTION OF FLOW, DEPTH, ADEQUATE SLOPE AND INTEGRITY OF LINE PRIOR TO INSTALLATION.

H. MAINTAIN A MINIMUM CLEARANCE OF 25 FEET BETWEEN ALL VENT PENETRATIONS AND AIR INTAKES.

I. ALL WATER PIPING □ABOVE CEILING, IN WALLS AND BELOW SLAB, ETC..□SHALL BE INSULATED.

PRE-CONSTRUCTION CHECK

A. THE PLUMBING CONTRACTOR SHALL PERFORM THE FOLLOWING PRE-CONSTRUCTION CHECK, AFTER THE AWARD OF CONTRACT, AND BEFORE BEGINNING CONSTRUCTION:

B. TEST ALL EXISTING FIXTURES, EQUIPMENT, AND WATER HEATERS TO VERIFY ALL ITEMS ARE FULLY OPERATIONAL AND REQUIRE NO REPAIRS.

C. THE CONTRACTOR SHALL NOTIFY THE BUILDING OWNER IN WRITING OF ANY DEFICIENCIES FOUND AND SHALL OBTAIN WRITTEN INSTRUCTIONS FROM THE BUILDING OWNER PRIOR TO BEGINNING CONSTRUCTION REGARDING ANY ACTION TO BE TAKEN. ITEMS NOT ADDRESSED IN THE PRE-CONSTRUCTION CHECK SHALL BE CORRECTED BY THE CONTRACTOR PRIOR TO COMPLETION OF CONSTRUCTION AT NO ADDITIONAL COST TO OWNER.

DVO PROJECT – 191034

yes prep PUBLIC SCHOOLS

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5215 JENSEN ST.
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PLUMBING SYMBOLS + ABBREVIATIONS

Project Number	17018
Date	03/01/19
Drawn By	EJG
Checked By	WD

P000

Scale: As Indicated

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1.1 15010 PLUMBING GENERAL

A. Re□erence: All portions o□General Conditions apply to Plumbin□work.

B. Guarantees: Pro□ide written one year □uarantee □or all systems and e□uipment. Compressors shall be □uaranteed □or □i□e years.

C. Codes: Comply with National, State and City codes and other applicable standards. All portions o□the International Ener□y Conser□ation Code □IECC□and Current Local AHJ Commercial Ener□y Conser□ation Codes must be complied with.

D. Super□ision: Pro□ide super□isor in □ield □or each phase o□work.

E. Coordination: Coordinate all work with other trades. Pro□ide mechanical and plumbin□ e□uipment with electrical characteristics compatible with that shown on the Electrical Drawin□s and described in the Electrical Di□ision o□the speci□ications. The en□ineer reser□es the ri□ht to mo□e ser□ices as re□uired to coordinate the work, at no cost to the owner.

F. The drawin□s are schematic in nature, and should not be scaled, but show the □arious components o□the systems appro□imately to scale and attempt to indicate how they are to be inte□rated with other parts o□the buildin□. Determine e□act locations by job measurements, by checkin□the re□uirements o□other trades, and by re□iewin□all Contract Documents. The drawin□s indicate □eneral routin□o□the □arious parts o□the systems, but do not indicate all □ittin□s, o□sets, and run outs which are re□uired. The Contract shall include all □ittin□s, o□sets, and run outs re□uired to □it the system into spaces allotted to them.

G. Shop Drawin□s and Submittal Data: PAPERLESS SUBMITTAL ONLY TO ENGINEER. All Shop Drawin□s and Submittal Data shall be an electronic □ile □ormat only. PDF □ormat is acceptable. All e□uipment and materials shall be submitted, includin□pipin□ and e□uipment chan□es, as re□uired. Submitted items that de□iate □rom the drawin□s and speci□ications shall be hi□hli□hted in yellow □or easy distinction. Re□uests □or substitutions shall be submitted □or re□iew and appro□al a minimum o□15 business days prior to □inal bids. Mark all items and show that they comply with the IECC. The En□ineer shall issue a letter statin□the action taken on the submittal. The letter shall be copied and attached to the submittal, by the contractor, and distributed as re□uired.

H. Record Data: Obtain, at Contractor's e□pense, a set o□prints and keep these on the job site durin□construction. Durin□construction, mark on these prints any chan□es that are made, notin□particularly locations o□those items that will need to be □or ser□icin□. Con□ert record data to an Electronic Format □PDF□and submit to the Architect. Furnish one set o□shop drawin□s and maintenance manuals in brochure □orm. Record Brochures shall be □i□en to the owner at completion o□the work.

I. Permits, Fees: Secure and pay □or all □ees and char□es □or the work. Furnish certi□icates o□acceptance at completion o□the job □rom City.

J. Substitutions: No substitutions shall be made without prior appro□al □rom the Architect and En□ineer.

K. Cuttin□and Patchin□: Cuttin□to be by this section, with patchin□and □urrin□by General Contractor. Patchin□re□uired a□ter completion o□work shall be paid □or by Contractor.

L. Clean Up: Clean and touch-up paint all e□uipment at completion o□work. Protect all e□uipment □rom dama□e durin□construction. Pro□ide name plates on all e□uipment.

M. Tests: Tests all pipin□systems per local code. Sterili□e all new water pipin□per Health Department re□uirements.

N. Test all e□uipment and pro□e per□ormance results to Architect. Modi□y all dri□es, balance all systems as shown on the drawin□s. A□ter Owner has occupied and is usin□the buildin□, make additional inspections o□the system. Correct any Owner's obser□ed temperature imbalances. Check correct operation o□e□uipment and □eri□y by letter to the Architect, on each trip. List in the letter corrections made. At the opposite season o□the startup inspect and □eri□y correct operation o□all systems. Tests all control systems. Furnish complete copy o□all test data to Architect. Instruct owner □or one day in operation o□all systems. Filters and strainers shall be clean when systems are accepted by the owner. Testin□Re□ulations must meet local City Re□uirements.

O. E□ca□atin□and Back□illin□: E□ca□ate to pro□ide minimum 2 □eet co□er o□er all pipin□ and conduit. Back □ill to ori□inal compaction. Saw-cut e□istin□□inishes and patch to matchin□ori□inal conditions.

P. Noise and Vibration: All e□uipment shall operate with minimum o□noise and □ibration. Contractors shall recti□y any objectionable conditions.

Q. Temporary Ser□ices: Furnish temporary utility as re□uired □or new construction.

R. E□uipment Connections: Pro□ide all martial and labor □or connectin□o□all e□uipment □urnished in other sections or by owner. Field □eri□y all e□uipment □or dimensions and rou□hin□-in. Furnish all □al□es, drain pipin□, traps, etc., as re□uired to install the e□uipment.

S. Floor Drains: Final location will be determined by e□uipment layout and location must be □ield appro□ed. Pro□ide trap primers to all □loor drains.

T. E□amination o□Site: The contractor is responsible □or □isitin□the job site and con□irmin□ the location o□e□istin□conditions be□ore biddin□. I□e□istin□conditions re□uire modi□ication due to ele□ation, obstruction, si□e, etc., the contractor will ad□ise in writin□ be□ore be□innin□construction.

END OF SECTION 15010

1.2 15030 PLUMBING SPECIFICATIONS

A. Pro□ide all materials and labor □or complete plumbin□system.

B. Cleanouts "CO":

1. Un□inished Areas and Chases "CO": Smith □□□00.
2. Outside Areas "GCO": Smith□□2□0 in concrete pad 2□"□2□"□6".
3. E□ual Cleanouts: Wade, Mi□ab, Watts, Zurn, or Josam. Install at chan□es in direction, ma□imum o□90' spacin□, and base on risers and local code.

C. Val□es: Val□es to be Nibco or e□ual by Milwaukee: Ball - □T-FP-600A-LF, Globe - □T-211-B Check - □T-□13-Y-LF.

D. Under□round □al□es to be installed in cast iron bo□es, with cast iron co□er marked "WATER".

E. Pipe Han□ers: Securely suspend pipes □rom buildin□structure.

1. Wall supports - B-Line □B22SH, 1-5/8" □1-5/8" pre-□al□ani□ed 12 □au□e slotted strut anchored to the wall. Secure pipes to strut with B-Line □B2□00 series standard pipe clamps. Pro□ide B-Line □B1999 VibraCushion isolation on copper pipin□.
2. Pro□ide pipe shields in accordance with insulation manu□acturers published recommendations per MSS SP-58.
3. Vertical pipin□□loor supports: B-Line □3373, Standard pre-□al□ani□ed riser clamps.
□. All materials used in supportin□pipe to be pre-□al□ani□ed.
5. Pro□ide pre-□al□ani□ed steel pipe slee□es □or pipes throu□h walls, □loors, and roo□s.

G. Sanitary System □Waste and Vent□:

1. Below □rade: Schedule □0 solid wall PVC pipe con□ormin□to ASTM D2665 and ASTM D1785 and PVC draina□e pattern □ittin□s con□ormin□to ASTM D3311 and ASTM D2665 as manu□actured by Charlotte Pipe. Install per manu□acturer's recommended installation procedures. Buried PVC pipe shall be installed per ASTM D2321. Cellular □Foam□Core pipin□con□ormin□to ASTM F891 is NOT acceptable.
2. Abo□e □rade: Ser□ice wei□ht cast iron bell and spi□ot pipe and □ittin□s con□ormin□to ASTM A-7□as manu□actured by Charlotte Pipe, Tyler Pipe, or e□ual. Hubless cast iron soil pipe and □ittin□s con□ormin□CISPI 301. All cast iron soil pipe and □ittin□s shall be marked with the Collecti□e Trademark o□the Cast Iron Soil Pipe Institute and be listed by NSF International. Install all cast iron soil pipe systems per the Cast Iron Soil Pipe Institute Handbook.

I. Water Systems:

1. Water pipin□inside the buildin□shall be type "K or L" copper with copper □ittin□s. Under□round ser□ice lines shall be ductile iron water pipe and □ittin□s or type "K" copper with bra□ed copper joints. Pro□ide dielectric □ittin□s at points o□connection o□ dissimilar metals.

J. Pipe Installation: Install water pipin□le□el. Pro□ide drains at low points o□system. Sewers and condensate shall be sloped at not less than 1/8 inch per □oot. Pro□ide deep seal traps □or all □loor drains. Pipe shall run parallel to buildin□lines. Full pro□ision shall be made □or e□pansion and contraction o□pipin□. Pro□ide air chambers at each □i□ture, □ull line si□e 12" hi□h. Vent pipes shall be □lashed at the roo□with appro□ed roo□lashin□, e□tendin□not less than 12" in all directions in all directions. Turn □lashin□down in to □ent 1 inch. Pro□ide a stop □al□e at e□ery □i□ture or e□uipment. All connection to e□uipment shall be made with unions. Pipin□shall not contact an electrical conduit at any point. Access doors or panels shall be □urnished by this contractor.

K. Pipin□Joints:

1. Cast Iron Bell and Spi□ot - Compression □askets con□ormin□ASTM C56□.
2. Cast Iron No-Hub - Standard Duty hubless couplin□s con□ormin□to CISPI 310, certi□ied by NSF International, and made in the United States.
3. Cast Iron No-Hub - Hea□y Duty hubless couplin□s con□ormin□to ASTM C15□0 and manu□actured in the United States.
□. Copper pipe - Press type copper □ittin□s with automatic leak detection as manu□actured by Vie□a or e□ual by Nibco or solder type copper □ittin□s with Lead □ree solder.
5. Screw Joints - American standard with Te□lon tape.
6. Mechanical joints - ASA S 21.11-53
7. Unions - At each item o□e□uipment. Where copper and steel pipes are connected, make connections with insulated type □ittin□s.

P. Plumbin□Fi□tures:

1. All plumbin□□i□tures shall meet the re□uirements □or water conser□ation as re□uired by ANSI and local code.
2. Fi□tures and installation must meet all ADA re□uirements.
3. Re□erence drawin□s □or Plumbin□Fi□ture Schedules.
□. Acceptable Manu□acturers:
   a. Drains and Carriers: Jay R. Smith, Wade, Watts, Mi□ab, Zurn, Josam.
   b. Stops, Supplies, P-Traps, Tailpieces: Mc□uire.

Q. Plumbin□Accessories:

1. Trap Primer "TP": Traps shall ha□e P.P.P Inc. Ore□on □1 trap primers. Pro□ide trap primer distribution unit □or one throu□h □our drains. E□tend 3/8" copper pipe to all □i□tures as re□uired by code or showed on the drawin□s. Inline Floor Drain Trap Sealer "Trap Seal" may be installed i□allowed by code.

V. Demolition: Pro□ide materials and labor re□uired □or the remo□al o□all plumbin□de□ices as noted on the drawin□s. Remo□e all de□ices related to the demolition o□partitions and ceilin□s o□the e□istin□buildin□.

END OF SECTION 15030

DVO PROJECT — 191034

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REGISTRATION NO. F-8334

No.	Description	Date
	ISSUE FOR PRICING / PERMIT	03/01/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE
CAMPUS
LEGACY
CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

PLUMBING SPECIFICATIONS

Project Number	17018
Date	03/01/19
Drawn By	EJG
Checked By	WD

P001

Scale: As Indicated

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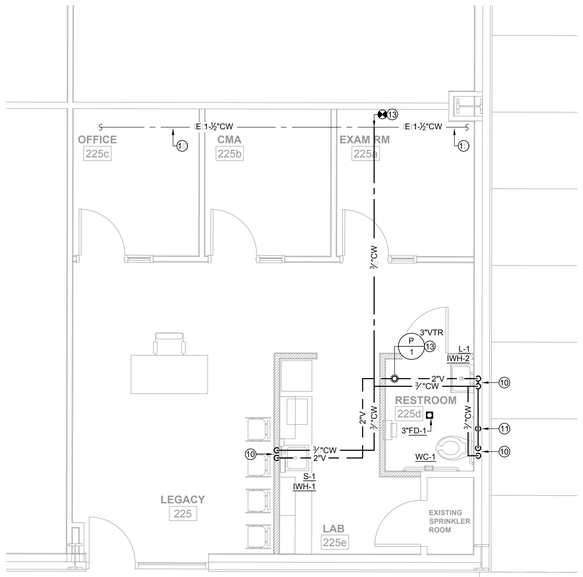
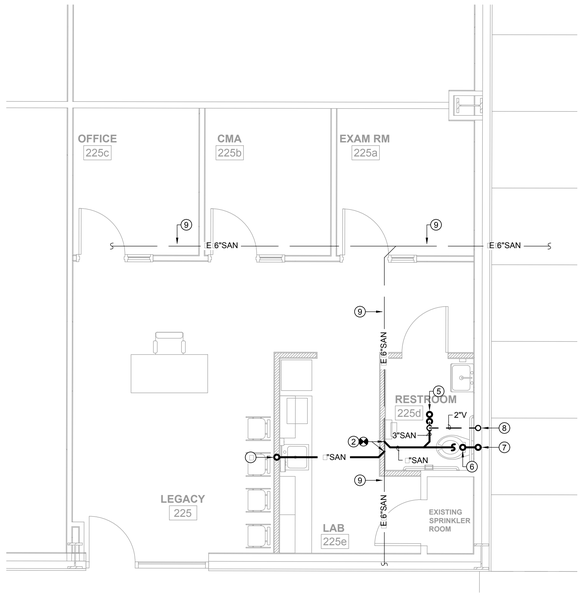
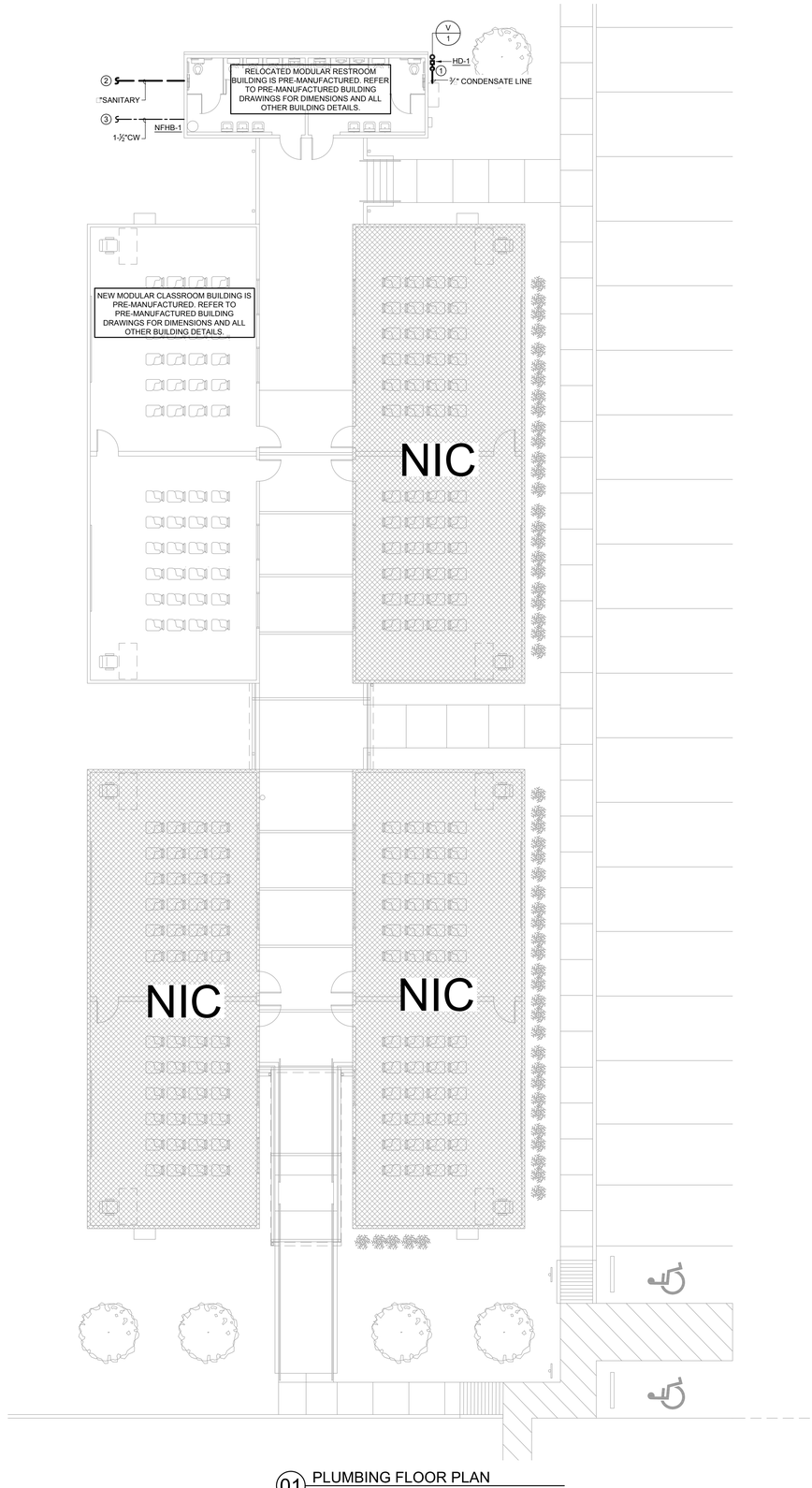


03 PLUMBING FLOOR PLAN
SCALE: 1/8"=1'-0"



02 PLUMBING UNDERGROUND PLAN
SCALE: 1/8"=1'-0"



01 PLUMBING FLOOR PLAN
SCALE: 1/8"=1'-0"

GENERAL PLUMBING NOTES:

A. REFER TO SHEET P000 FOR ADDITIONAL PLUMBING GENERAL NOTES.

B. VERIFY ALL DIMENSIONS AT JOBSITE.

C. CONTRACTOR SHALL REMOVE ALL NECESSARY EXISTING SERVICES SUCH AS WATER, WASTE, VENT AND GAS PIPING SERVING FIXTURES TO BE REMOVED AND/OR CONNECTIONS TO EQUIPMENT TO BE REMOVED. REMOVE ANY AND ALL UNUSED SERVICE LINES ABOVE CEILINGS, IN WALLS OR BELOW FLOORS.

D. CONTRACTOR SHALL PATCH AND FILL ALL UNUSED EXISTING FLOOR PENETRATIONS.

E. PLUMBING CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AND MAKE FINAL CONNECTIONS TO FIXTURES AND EQUIPMENT.

F. INSULATE ALL DOMESTIC WATER PIPING SUBJECTED TO FREEZING TEMPERATURE.

G. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT LOCATION OF FIXTURES, EQUIPMENT.

H. PLUMBING CONTRACTOR SHALL COORDINATE ALL PIPING AND EQUIPMENT WITH OTHER TRADES PRIOR TO INSTALLATION OF ANY PIPING OR EQUIPMENT.

I. PLUMBING CONTRACTOR SHALL VERIFY THE EXACT SIZE, LOCATION, DEPTH AND PRESSURE OF ALL EXISTING UTILITY LINES BEFORE COMMENCING WORK.

J. VENT PIPING TO BE 2" UNLESS OTHERWISE NOTED.

K. VENT TO HAVE CLEARANCE OF 10 FEET, MINIMUM, FROM ANY INTAKE FOR FRESH AIR.

L. COORDINATE ALL WORK WITH OWNER OR REPRESENTATIVES.

M. ALL UNDERGROUND WATER LINES SHALL BE TYPE "K" COPPER TUBING WITH 1/2" ARMAFLEX INSULATION.

N. PROVIDE BACKFLOW PREVENTER AT THE LOCATIONS REQUIRED BY CODE, AND ALL GOVERNING AUTHORITIES.

O. REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AFFECTING THIS WORK.

P. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT.

KEYED NOTES:

1. ROUTE ¾" CONDENSATE LINE TO HUB DRAIN.
2. NEW 1" SANITARY CONNECT TO NEAREST EXISTING SANITARY PIPING. FIELD VERIFY EXACT SIZE, LOCATION, AND DIRECTION OF FLOW.
3. NEW 1-½" CW CONNECT TO NEAREST EXISTING CW PIPING. FIELD VERIFY EXACT SIZE AND LOCATION.
4. NEW 2" SANITARY FROM SINK ABOVE.
5. NEW 3" SANITARY FROM FLOOR DRAIN ABOVE.
6. NEW 1" SANITARY FROM WATER CLOSET ABOVE.
7. NEW 1" SANITARY DOWN. 2" VENT UP.
8. 2" VENT UP.
9. EXISTING 6" SANITARY PIPING. FIELD VERIFY EXACT SIZE, LOCATION, AND DIRECTION OF FLOW.
10. ¾" CW DOWN. 2" VENT UP.
11. 2" VENT FROM BELOW.
12. 3" VENT UP TO VTR.
13. NEW ¾" CW CONNECT TO EXISTING CW PIPING. FIELD VERIFY EXACT SIZE, AND LOCATION.
14. EXISTING 1-½" CW PIPNG. FIELD VERIFY EXACT SIZE, AND LOCATION.

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REGISTRATION NO. F-8334

No.	Description	Date
	ISSUE FOR PRICING / PERMIT	03/01/19

YES PREP
PUBLIC SCHOOLS

NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

PLUMBING FLOOR PLAN

Project Number	17018
Date	03/01/19
Drawn By	EJG
Checked By	WD

P101

Scale As Indicated

DVO PROJECT – 191034

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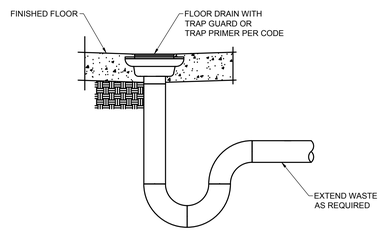

06 FLOOR DRAIN DETAIL
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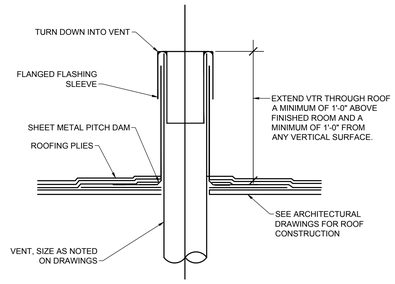

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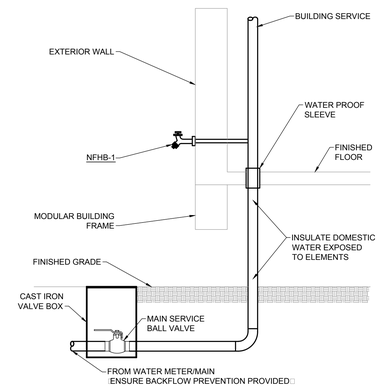

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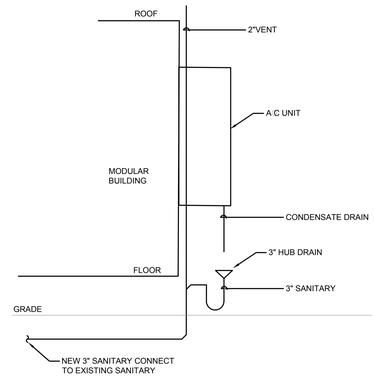

03 CONDENSATE DRAIN DETAIL
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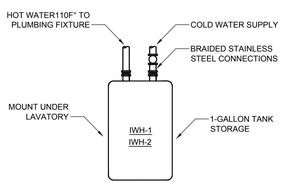

02 INSTA HOT WATER HEATER DETAIL
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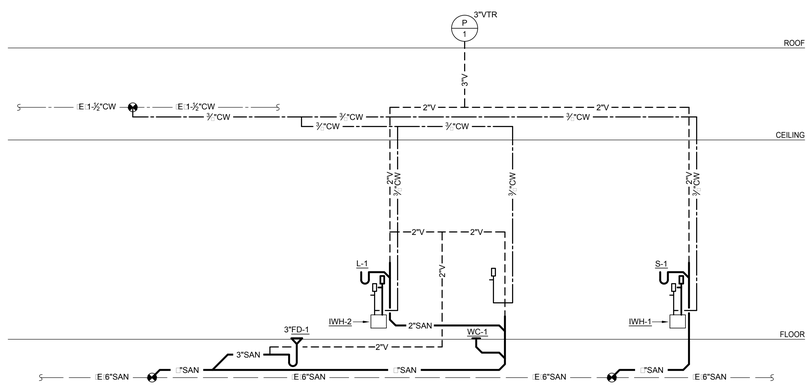

01 PLUMBING RISER DIAGRAM
SCALE: NTS

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION / MANUFACTURER / MODEL	REMARKS
WC-1	WATER CLOSET □ADA□	FIXTURE: AMERICAN STANDARD □211AA.10□ CHAMPION, 1.28 GPF, FLOOR MOUNT, WHITE VITREOUS CHINA, ELONGATED, 16-1/2" RIM HEIGHT, TANK TYPE WITH EVERCLEAN SURFACE. SEAT: AMERICAN STANDARD □5901.100, HEAVY DUTY OPEN FRONT LESS COVER.
L-1	LAVATORY □ADA□	FIXTURE: AMERICAN STANDARD □0355.012 LUCERNE, WALL MOUNTED, WHITE VITREOUS CHINA, 21" X 18" WITH □" CENTERSET FAUCET HOLES, FRONT OVERLFOW. FAUCET: MOEN □8800F05, 0.5 GPM, □" WRIST BLADE STYLE HANDLES, ADA COMPLIANT, 0.5 GPM, CHROME PLATED. MIXING VALVE: BRADLEY □S59-□000BY, BELOW DECK THERMOSTATIC MIXING VALVE WITH MOUNTING BRACKET □S□5-2□56. TRIM: MCGUIRE □155WC, 1-1/□" CHROME PLATED CAST BRASS OFFSET TAILPIECE WITH FLAT PERFORATED GRID STRAINER. MCGUIRE □8872C CHROME PLATED CAST BRASS P-TRAP AND CLEANOUT PLUG WITH HEAVY BRASS SLIP NUTS. MCGUIRE □LFH2165LK LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS. CARRIER: JAY R SMITH □0700 SERIES, FLOOR MOUNT WITH CONCEALED ARM SUPPORTS.
S-1	SINK - SINGLE COMPARTMENT □ADA□	FIXTURE: ELKAY □LRADQ191865PD LUSTERTONE, SINGLE BOWL TOP MOUNT, TYPE 30□ STAINLESS STEEL, 18 GA. 19"X18"X6-½", REAR CENTER DRAIN, QUICK-CLIP MOUNTING SYSTEM, ADA COMPLIANT. FAUCET: MOEN □8957, □" CENTER TWO-HANDLE FAUCET, □5" GOOSENECK, 1.2 GPM, CHROME PLATED, ADA COMPLIANT. TRIM: MCGUIRE □1151AWC, 1-1/2" CHROME PLATED CAST BRASS OFFSET TAILPIECE WITH STAINLESS STEEL BASKET STRAINER. MCGUIRE □8912C CHROME PLATED CAST BRASS P-TRAP AND CLEANOUT PLUG WITH HEAVY BRASS SLIP NUTS. MCGUIRE □111.17GA. CONTINUOUS WASTE. MCGUIRE □LFH2165LK LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS. MIXING VALVE: BRADLEY □S59-□000BY, BELOW DECK THERMOSTATIC MIXING VALVE WITH MOUNTING BRACKET □S□5-2□56. INSULATION KIT: PLUMBEREX OR TRUEBRO INSULATION ON TAILPIECE, P-TRAP, STOPS AND SUPPLIES.
FD-1	FLOOR DRAIN	FIXTURE: JAY R. SMITH □2005-07-NB, COATED CAST IRON BODY, TWO PIECE BODY WITH DRAINAGE FLANGE, INVERTIBLE NON-PUNCTURING FLASHING COLLAR, SEEPAGE HOLES, BOTTOM OUTLET AND ADJUSTABLE 7" ROUND NICKEL BRONZE STRAINER.
HD-1	HUB DRAIN	FIXTURE: JAY R. SMITH □2005-F37-PB-3580, COATED CAST IRON BODY, TWO PIECE BODY WITH DRAINAGE FLANGE, INVERTIBLE NON-PUNCTURING FLASHING COLLAR, SEEPAGE HOLES, BOTTOM OUTLET AND ADJUSTABLE 7" ROUND POLISHED BRONZE RECESSED STRAINER AND □" FUNNEL.
NFHB-1	NON FREEZE HOSE BIBB	FIXTURE: J.R. SMITH □5609QT, BRONZE NICKEL PLATED, QUARTER TURN, NON FREEZE, ¾" HOSE CONNECTION, BACKER PLATE, INTEGRAL VACUUM BREAKER WITH VANDAL RESISTANT CAP AND "T" HANDLE KEY.

COMPACT POINT-OF-USE ELECTRIC WATER HEATER SCHEDULE

MARK	GALLONS	AMPS	KW	OUTPUT TEMPERATURE	VOLTAGE AVAILABLE	MANUFACTURER MODEL NO.
IWH-1	1.3	12	1□0W	120°	120V 1PH	CHRONOMITE □CMT-1.3
IWH-2	1.3	12	1□0W	120°	120V 1PH	CHRONOMITE □CMT-1.3

SHOCK ARRESTOR SCHEDULE

PIPE SIZE	FIXTURE UNITS
1 / 2"	1-11
3 / □"	12-32
1"	33-60
1-1 / □"	61-113
1-1 / 2"	11□-15□
2"	155-330

1. ACCEPTABLE MANUFACTURERS INCLUDE PRECISION □PLUMBING PRODUCTS, SIOUX CHIEF, WADE AND MIFAB.

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NORTHSIDE CAMPUS LEGACY CLINIC

5215 JENSEN ST.
HOUSTON, TX 77026

MECHANICAL NOTES, SCHEDULES + DETAILS

Project Number	17018
Date	03/01/19
Drawn By	EJG
Checked By	WD

P201

Scale As Indicated

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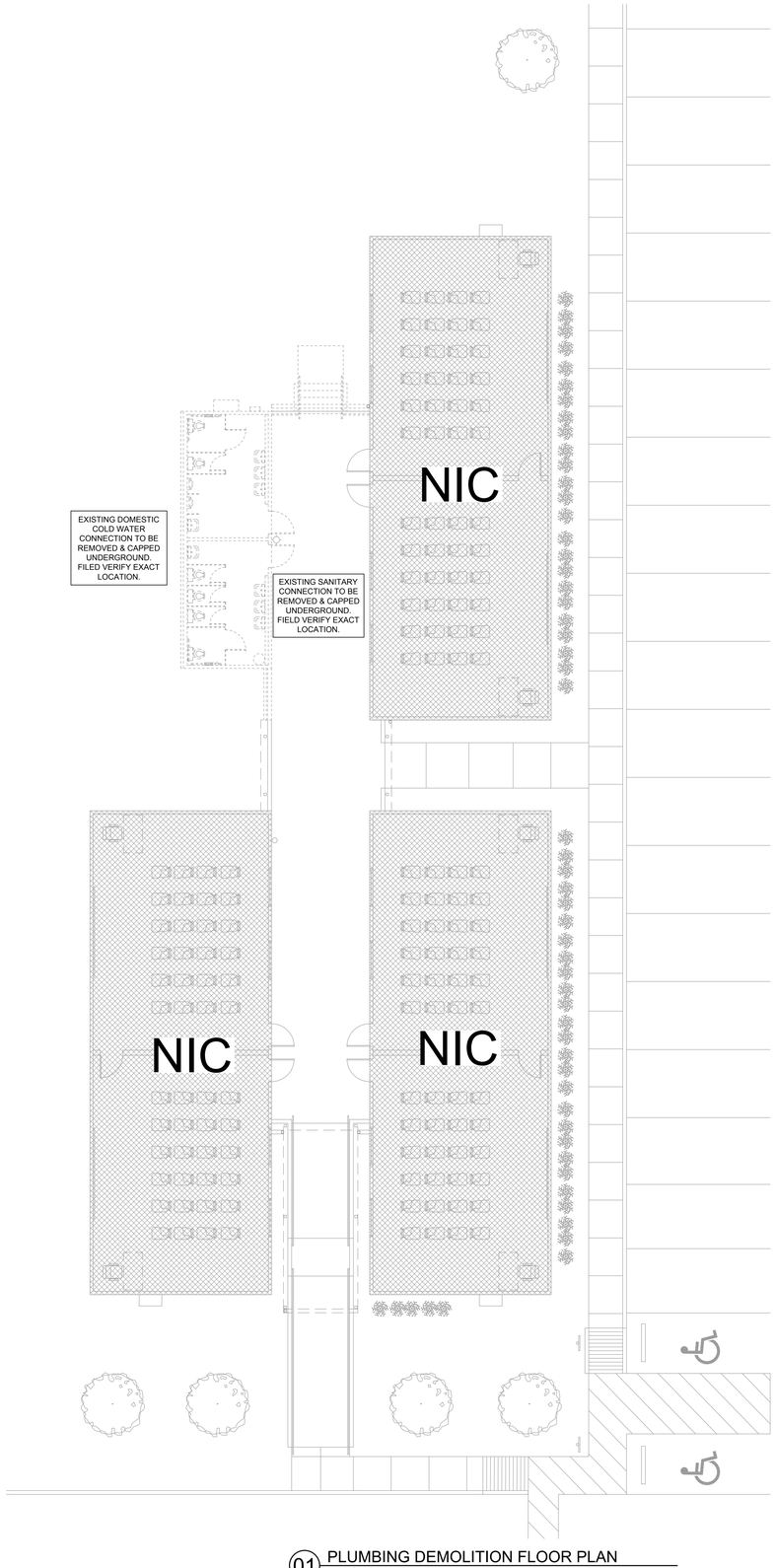

01 PLUMBING DEMOLITION FLOOR PLAN
SCALE: 1/8"=1'-0"

GENERAL PLUMBING NOTES:

A. REFER TO SHEET P000 FOR ADDITIONAL PLUMBING GENERAL NOTES.

B. VERIFY ALL DIMENSIONS AT JOBSITE.

C. CONTRACTOR SHALL REMOVE ALL NECESSARY EXISTING SERVICES SUCH AS WATER, WASTE, VENT AND GAS PIPING SERVING FIXTURES TO BE REMOVED AND/OR CONNECTIONS TO EQUIPMENT TO BE REMOVED. REMOVE ANY AND ALL UNUSED SERVICE LINES ABOVE CEILINGS, IN WALLS OR BELOW FLOORS.

D. CONTRACTOR SHALL PATCH AND FILL ALL UNUSED EXISTING FLOOR PENETRATIONS.

E. PLUMBING CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AND MAKE FINAL CONNECTIONS TO FIXTURES AND EQUIPMENT.

F. INSULATE ALL DOMESTIC WATER PIPING SUBJECTED TO FREEZING TEMPERATURE.

G. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT LOCATION OF FIXTURES, EQUIPMENT.

H. PLUMBING CONTRACTOR SHALL COORDINATE ALL PIPING AND EQUIPMENT WITH OTHER TRADES PRIOR TO INSTALLATION OF ANY PIPING OR EQUIPMENT.

I. PLUMBING CONTRACTOR SHALL VERIFY THE EXACT SIZE, LOCATION, DEPTH AND PRESSURE OF ALL EXISTING UTILITY LINES BEFORE COMMENCING WORK.

J. VENT PIPING TO BE 2" UNLESS OTHERWISE NOTED.

K. VENT TO HAVE CLEARANCE OF 10 FEET, MINIMUM, FROM ANY INTAKE FOR FRESH AIR.

L. COORDINATE ALL WORK WITH OWNER OR REPRESENTATIVES.

M. ALL UNDERGROUND WATER LINES SHALL BE TYPE "K" COPPER TUBING WITH 1/2" ARMAFLEX INSULATION.

N. PROVIDE BACKFLOW PREVENTER AT THE LOCATIONS REQUIRED BY CODE, AND ALL GOVERNING AUTHORITIES.

O. REFERENCE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AFFECTING THIS WORK.

P. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT.

DVO PROJECT – 191034

yes prep
PUBLIC SCHOOLS

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JASON W. DYSON
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PLUMBING DEMOLITION FLOOR PLAN

Project Number	17018
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PD101

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