

**Invitation to Bid for
Chelsea High School Interior Renovations**
For the City of Chelsea, MA

Contract # 2016-133

February 2016

IFB Contact:

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MANDATORY SUBMITTALS:

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- BID PRICING FORM
- REFERENCE FORM
- OSHA COMPLIANCE CERTIFICATION

IFB ATTACHMENTS:

SAMPLE CITY OF CHELSEA CONTRACT FOR SERVICES OVER \$10,000

MASSACHUSETTS PREVAILING WAGE RATES

PLANS & SPECS

CITY OF CHELSEA
NOTICE TO BIDDERS
Chelsea High School Interior Renovations
299 EVERETT AVE.
CHELSEA, MASSACHUSETTS

The City of Chelsea, Chelsea, Massachusetts invites sealed proposals from Contractors to build out two new office spaces on the first floor of the high school building AND to split existing technology lab space on the second floor into TWO classrooms.

A. In general, the work-- Per design drawings provided along with this summary of work--shall consist of but NOT BE LIMITED to the following narrative:

- Green Building Administrative Suite on the first floor:
 - Create two new private offices within the existing open office space
 - Provide doors and side-lites to match existing in the suite
 - Provide all new finishes to match existing
 - Mechanical, Electrical, Fire Protection Work per bid drawings and specs
- Classroom on second floor to be split into two classrooms:
 - Create two new classrooms within the existing open space
 - Provide new door from corridor to new classroom
 - Provide all new finishes to match existing
 - Mechanical, Electrical, Fire Protection Work per bid drawings and specs

The estimated cost of the work is \$ 175,000.00

Plans, specifications and other Contract Documents may be obtained at the Purchasing Office, City of Chelsea, City Hall, Room 206, 500 Broadway, Chelsea, MA, **after 11:00 AM., E.D.T., February 4, 2016.** Copies of the documents for the project may be obtained by email for the purposes of bidding from the City of Chelsea.

Sealed general bids for this project will be accepted from eligible bidders at the City of Chelsea, Purchasing Office, **ATTN: Chief Procurement Officer, City Hall – Room 206, 500 Broadway, Chelsea, MA 02150** until **11:00 AM, E.D.T February 18, 2016** at which place and time they shall be publicly opened, read aloud and recorded for presentation by the Awarding Authority.

A pre-bid conference will be held for all interested parties on-site at the High School, 299 Everett Ave., Chelsea, MA on **February 11, 2016 at 10:00 AM, E.D.T.** Attendance at this pre-bid conference is **STRONGLY RECOMMENDED** for parties submitting a bid.

Each bid shall be accompanied by a bid deposit in the form of a bid bond, or cash, or a certified check on, or a treasurer's or cashier's check issued by a responsible bank or trust company, payable to the City of Chelsea in the amount of five percent (**5%**) of value of the bid. Bid deposits will be dealt with as provided in Massachusetts General Laws, Chapter 149, Section 44B.

To be given consideration, all general bids must be accompanied by a copy of the Bidder's Certificate of Eligibility (DCAM&M Form) and an Update Statement (DCAM&M

Form).

The certification category of work is: General Contractor certification.

Bids shall be made on the basis of the Minimum Wage Rates as determined by the Commissioner of Labor and Industries, Pursuant to the Provisions of Chapter 149, Sections 26 to 2W inclusive of Massachusetts General Laws, a copy of which is attached to and is made a part of the Contract.

Bidders' selection procedures and contract award shall be in conformity with applicable statutes of the Commonwealth of Massachusetts.

Performance, and Labor and Materials Payment Bonds in the full amount of the contract price will be required from the successful bidder.

The Awarding Authority reserves the right to reject any or all general bids, if it be in the public interest to do so, and to reject any sub-bid on any sub-trade if it determines that such sub-bid does not represent the sub-bid of a person competent to perform the work as specified or that less than three such sub-bids were received and that the prices are not reasonable for acceptance without further competition.

City of Chelsea

Dylan Cook
Chief Procurement Officer

Section 1 PROCUREMENT SCOPE

1.1 Authority

Invitation to Bid Procedures and award of the Contract shall be in accordance with Massachusetts General Law, Chapter 149, plus all applicable Federal, State and Local laws and regulations.

1.2 Withdraw, Modify, And Amend Bids

Bidders who wish to withdraw, modify or amend their bid must do so in writing utilizing electronic mail to the City of Chelsea Chief Procurement Officer at dcook@chelseama.gov or via fax at 617-466-4225, no later than the time and date set forth herein for the receipt of the Bid for **Chelsea High School Interior Renovations**. All such withdrawals, modifications or amendments must so state in the subject line of the email correspondence. Any withdrawal, modification or amendment arriving after the date and time set forth for accepting bids will not be considered. After the opening of the bids, a bidder may not change any provision of the bid in a manner prejudicial to the interests of the City of Chelsea or fair competition. Minor informalities will be waived at the discretion of the City of Chelsea.

1.3 Bid Bond

Each bid must be accompanied by a certified check: of the bidder or a bid bond duly executed by the bidder as principal and having as surety thereon a surety company approved by the City, in the amount of 5% of the bid, payable to the "City of Chelsea" and must be filed with the original bid.

1.4 Payment & Performance Bonds

The successful bidder is required to furnish performance bonds and payment bonds in the contract amount and with surety satisfaction to the City, in an award form this Invitation for Bids. The Bidder must pay all costs. The Performance Bond shall be in the sum of **100%** of the contract price. The Payment Bond shall be in the sum of **100%** of the contract price. The bonds shall be provided by the successful bidder to the City within five business days of the contract award.

1.5 Familiarity With Requirements

Bidders are to thoroughly familiarize themselves with the requirements of this Invitation for Bids. Ignorance of the requirements will not relieve the bidder from any obligations or liabilities of any contract(s) issued as a result of this Invitation for Bids.

1.6 Independent Party

Under this Invitation for Bids, the successful bidder declares itself to be at all times acting and performing as an independent party and nothing in this request for bid or any subsequent contract(s) is intended to constitute a partnership or joint venture between the bidder and the City of Chelsea.

1.7 Conflict of Interest

No officer or employee of the City of Chelsea shall participate in any decision relating to any contract which would affect their financial or personal interest or the interest of any corporation, partnership, sole proprietorship or association in which they are directly or indirectly interested.

1.8 Political Activity Prohibited

None of the services to be provided by any bidder shall be used for any partisan political activity or to further the election of any candidate for public office.

1.9 Assignment by Contractor

The successful bidder or contractor shall not assign in whole or in part or otherwise transfer any interest in any contract without the written consent of the City of Chelsea, provided however, that the present and prospective claims for money due owing to the Contractor from the City of Chelsea or any other Buyer may be assigned to a bank or trust company or to a financial institution insured by the Federal Deposit Insurance Corporation (FDIC) without such consent so long as notice of such assignment is promptly furnished to the City of Chelsea. Any complete or partial assignment of the contractor's or successful bidder's interest in any such contract shall require the assignee, at the City of Chelsea's discretion, to supply such further information as the City of Chelsea deems necessary to comply with the City of Chelsea rules and regulations governing contracts for services. Any such assignment, in whole or in part, shall also be expressly made subject to all defenses, set-offs or counter claims which would have been made available to the City of Chelsea against the successful bidder in the absence of such assignment.

1.10 Subcontracting

None of the services to be provided by the contractor pursuant to any contract shall be subcontracted or delegated in whole or in part to any other organization, association, individual, corporation, partnership, or any other such entity without the prior written approval of the City of Chelsea. All intended subcontracts must be in writing. All intended subcontracts shall be provisions, which are functionally identical to and consistent with the language of this Invitation for Bids.

1.11 Choice of Law

Any contracts awarded as a result of this Invitation for Bids shall be construed under the laws of the Commonwealth of Massachusetts. The successful bidder and agents thereof agree to bring any federal or state legal proceedings arising from any such contract in which the City of Chelsea is a party in a court of competent jurisdiction within the Commonwealth of Massachusetts. This section shall not be construed to limit any rights any party may have to intervene in any action in any court or wherever pending in which the other is a party.

1.12 Notices

Unless otherwise specified, any notice hereunder shall be in writing and shall be deemed delivered when sent via electronic mail (e-mail), given in person to either party or deposited in the U.S. Mail, postage prepaid and addressed to the persons indicated in any contract or as specified by any amendment hereto.

1.13 Severable Sections Do Not Affect Entire Contract

If any provision of the Invitation for Bids or any subsequent contract is declared or found to be illegal, unenforceable or void, then both parties shall be relieved of all obligations under the provision. The remainder of the Invitation for Bids and any subsequent contract shall remain in full force and effect and enforceable to the fullest extent provided by law.

1.14 Liquidated Damages for Failure to Enter Into Contract

The successful Responder, upon its failure or refusal to execute and deliver the Contract, Bond and Certificates of Insurance required within ten days after receipt of notice of the acceptance of the bid, shall forfeit to the City of Chelsea, as liquidated damages for such failure or refusal, the security deposited with its bid, provided that the amount forfeited shall not exceed the difference between its bid price and the bid price of the next lowest responsive and responsible Responder. In case of death, disability, bona fide clerical or mechanical error of a substantial nature or similar unforeseen circumstances affecting the Responder, its bid deposit shall be returned.

1.15 Liquidated Damages for Failure to Perform Under Terms of the Contract

Should the successful Responder fail to commence or diligently perform according to the terms of the contract, the successful Responder agrees to pay to the City of Chelsea, as liquidated damages, Two Hundred Fifty Dollars (\$250.00) per calendar day that the successful Responder fails to commence or diligently perform the work in accordance with the contract documents and/or is in violation of the contract. Liquidated damages assessed under this provision shall be deducted from any payment(s) due to the successful Responder.

1.16 Contract Performance

The failure of any party to insist in any one or more situations, upon performance of any of the terms or provisions of any part of this Invitation for Bids or resulting contract shall not be considered as a waiver or relinquishment of the right of either party to future performance of any such term or provision, and the rights and obligations of the parties to such future performance shall continue in full force and effect.

1.17 Prevailing/Minimum Wages

Prevailing/Minimum Wage Rates as determined by the Commissioner of the Division of Occupational Safety of the Executive Office of Labor and Workforce Development under the provisions of Massachusetts General Laws Chapter 149, Section 26 to 27D, as amended, apply to this project. It is the responsibility of the Bidder, before the bid opening, to request, if necessary, any additional information on Prevailing/Minimum Wage Rates for those trades’ people who may be employed for the proposed work under this contract.

1.18 Funding & Fiscal Year Appropriation

Appropriations for expenditures by the City of Chelsea and authorizations to spend for a particular purpose are ordinarily made on a fiscal year basis. The fiscal year for the City of Chelsea, MA begins on July 1st and ends June 30th of the following year. The obligations of the City of Chelsea under any contract resulting from this Invitation for Bids for any subsequent fiscal year following the fiscal year in which the initial contract is awarded is subject to the appropriations to the City of Chelsea of funds sufficient to discharge its obligations, which accrue in such subsequent fiscal year, and to the authorization to spend such funds for the purposes of this Invitation for Bids. In the absence of such appropriation or authorization, any contract resulting from this Invitation for Bids shall be terminated immediately without liability for damages, penalties or other charges arising from early termination. Expenditures for contracted services, which will extend beyond a single fiscal year shall not exceed in any fiscal year the amount appropriated and authorized for the said fiscal year.

1.19 Procurement Calendar

The City of Chelsea invites bids that will result in a contract. The IFB schedule of events for this solicitation, subject to amendment by the City of Chelsea is:

EVENT	DATE
IFB Released	2/4/2016
<u>Optional On-site Pre-Bid Meeting</u>	<u>2/11/2016 at 10:00am</u>
Deadline for Written Inquiries	2/15/2016
Response to Written Inquiries	2/16/2016
Due Date for Responses	2/18/2016 at 10:00am

1.20 Duration of Contract

The term of this contract will commence upon signature of agreement and end no later than September 30, 2016.

End of Section

Section 2 General Bid Information

2.1 Required IFB Sections

The Responder must provide, in its bid, a reply to the particular specifications included in the Invitation for Bids.

2.2 Minority or Woman Business Enterprise Participation

In accordance with the Minority Business Enterprise Plan for the City of Chelsea, all qualified Minority-Owned Business Enterprises (MBE) or Woman-Owned Business Enterprises (WBE) are strongly encouraged to submit bids in response to this Invitation for Bids. For the purpose of this IFB, the term MBE or WBE shall mean a vendor who is certified as a minority business enterprise by the State Office of Minority and Women-Owned Business Assistance (SOMWBA), and who is certified at the time the vendor's bid is submitted.

All minority owned businesses are encouraged to apply for SOMWBA certification. For further information on SOMWBA qualifications or access to SOMWBA vendor lists, contact the Supplier Diversity Office, Commonwealth of Massachusetts Operational Services Division at 617-720-3300.

2.3 The Contract Award

Based upon the bids received, the contract will be awarded to the lowest responsive and eligible Bidder.

2.4 ADA, Regulatory, Compliance and Standards

Responders are expected to provide services and commodities that are in compliance with Section 504 of the Federal Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the Telecommunications Act of 1996, and all successor federal and related legislation throughout the term of any contract resulting from this solicitation.

2.5 Indemnification

Any successor in exchange for entering into an agreement or contract resulting from this Invitation for Bids shall indemnify and hold harmless the City of Chelsea and all persons acting for or on behalf of either of them from all suits and claims against them, or either of them, arising from or occasioned by the use of any service, material, equipment or apparatus, or any part thereof, which infringes or is alleged to infringe on any patent rights. In case such service, material, equipment or apparatus, or any part thereof in any suit is held to constitute infringement, the successful Responder, within a reasonable time, will at its expense, and as the City of Chelsea may elect, replace such material, equipment or apparatus with non-infringing material, equipment or apparatus or remove

the material, equipment or apparatus and refund the amounts paid therefore. Said indemnification includes reasonable attorney's fees related thereto.

Furthermore, any successful Responder in exchange for entering into any agreement or contract resulting from this Invitation for Bids agrees to indemnify and hold harmless, release and forever discharge the City of Chelsea as well as their officers, agents and employees as well as their successors and assigns from any and all manner of actions, suits, claims, demands, judgments, damages and liability in law and in equity which may arise or result from performance under this contract. This includes any discrimination, labor or employment claims against the successful Responder and the City of Chelsea and any and all manners of legal action brought against the successful Responder and /or the City of Chelsea. Said indemnification includes reasonable attorney's fees related thereto.

2.6 Federal, State and Local Laws

The successful Responder will comply with all applicable Federal, State and Local laws and regulations.

2.7 Tax Exempt

Purchases made by municipalities and government are exempt from Federal Excise Taxes and Massachusetts Sales Taxes and bid prices must show the exclusion of such taxes. Tax exemption certificates will be furnished as required.

2.8 Insurance

The successful Responder in addition to any insurance required by State or Local Law, shall maintain in force during the term of any contract(s) issued as a result of this Invitation for Bids, the following insurance issued by an insurance company licensed to do business in the Commonwealth of Massachusetts. Failure to provide or maintain such insurance shall be grounds to reject a bid or execute a contract.

- a. Public Commercial Liability coverage in the amount of \$1,000,000.00 per occurrence and \$2,000,000.00 aggregate. Automobile Liability Insurance coverage in the amount of \$500,000.00 per person, \$1,000,000.00 per occurrence. Property damage Insurance in the amount of \$250,000.00.
- b. Worker's Compensation Insurance in the amounts required by Massachusetts Law.
- c. Evidence of such insurance must name the City of Chelsea as the named insured as well as the successful Responder.
- d. An Insurance Certificate giving evidence of the insurance must be delivered to the City of Chelsea within 10 days by the successful Responder receiving the award of this Invitation for Bids.

2.9 Confidentiality

The successful Responder will comply with all provisions of Executive Order No. 11246 of September 24, 1975 and the successful Responder acknowledges that in performance of any contract resulting from the Invitation for Bids it may require or have access to “personal data” and become a “holder” of personal data as defined by M.G. L. c. 66A. The successful Responder shall comply with all laws and regulations relating to confidentiality and privacy, including but not limited to any rules and regulations of the City of Chelsea. The successful Responder shall at all times recognize the City of Chelsea’s ownership of personal data and the exclusive right and jurisdiction of the City, and “data subjects” (as defined in chapter 66A) to control the use of personal data. The successful Responder shall immediately notify the City of Chelsea both orally and in writing if any personal data in its possession is subpoenaed, improperly used, copied or removed by anyone except an authorized representative of the City of Chelsea. The successful Responder shall cooperate with the City of Chelsea in taking all steps it deems advisable to enjoin, misuse, regain possession and/or otherwise protect the City of Chelsea’s rights and data subject’s privacy. The successful Responder shall allow access to any personal data held in their possession solely to those employees of the City of Chelsea who require such information in the performance of their occupational responsibilities. All personal data held by the successful Responder shall be delivered to the City of Chelsea within 14 calendar days after termination of any contract resulting from this Invitation for Bids. The successful Responder agrees to take reasonable steps to insure the physical security of such data under its control, including but not limited to fire protection, protection against smoke and water damage, alarm system, locked removal of manually held data, passwords, access logs, badges or other methods reasonably expected to prevent loss or unauthorized access to electronically or mechanically held data, limited terminal access, access to electronically or mechanically held data, limited terminal access, access to input documents and design provisions to limit use of personal data. The successful Responder agrees that it will inform each of its employees having any involvement with their personal data or confidentiality. The City of Chelsea shall have access at all times to any data maintained pursuant to any contract resulting from this Invitation for Bids, without the consent of the data subject. The successful Responder shall use personal data, and material derived from such data, only as necessary for the performance of the subject contract. Failure of the successful Responder to comply with the requirements of this section may be grounds for terminating any contract resulting from this Invitation for Bids.

2.10 Force Majeure

Neither the City of Chelsea nor the successful Responder shall be liable to the other, nor deemed to be in breach of any contract resulting from this Invitation for Bids for failure or delay in rendering performance rising out of causes factually beyond its control and without its fault or negligence. Such causes may include, but are not limited to, Acts of God or the public enemy, wars, fires, flood, epidemics, quarantine restrictions, strikes, unforeseen freight embargos or unusually severe weather. Dates of times of performance shall be extended to the extent of delays excused by this section, provided that the party

whose performance is affected notifies the other party promptly of the existence and nature of such a delay. It is agreed that since the performance dates of the subject contract are of the essence and important to the implementation of essential City of Chelsea work, continued failure to perform for periods aggregating 45 or more calendar days, even for causes beyond the control of the successful Responder, shall afford the City of Chelsea the right to terminate any contract resulting from this Invitation for Bids without assessment of termination costs or penalties.

2.11 Equal Opportunity

During the performance of this contract, the successful Responder agrees as follows:

- a. The successful Responder will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, sexual orientation, which shall not include persons whose sexual orientation involves minor children as the sex object, genetic information or ancestry. The successful Responder will take affirmative action to ensure that applicants are employed and that the employees are treated during employment without regard to their race, religion, color, sex, nation origin or sexual orientation, which shall not include persons whose sexual orientation involves minor children as the sex object, genetic information or ancestry.
- b. The successful Responder will comply with all provisions of Executive Order No. 11246 of September 24, 1975 and all of the rules, regulations and relevant orders of the Secretary of Labor.

2.12 Termination

The Responders for this Invitation for Bids should note that the City of Chelsea reserves the right to terminate any contract resulting from this Invitation for Bids in whole or in part, by written notice:

- **Without cause:** Either party may terminate the subject contract by giving written notice to the other party at least 60 calendar days prior to the normal contractual effective date of termination as stated or such other period as is mutually agreed upon in advance by the parties
- **For cause:** If, in the opinion of the City of Chelsea, the successful Responder fails to fulfill its obligations, the City of Chelsea may terminate any contract resulting from this Invitation for Bids by giving 30 days written notice to the successful Responder at any time. The subject contract shall be terminated immediately in the event of fraud or program abuse.
- **Emergency:** The City of Chelsea may terminate or suspend any contract resulting from this Invitation for Bids up to 60 calendar days by providing written notice to the successful Responder, stating the grounds for the City of Chelsea's action, in the form of U.S. Mail, hand-carried letter, or other appropriate written means, if the City of Chelsea determines that immediate action is necessary to protect City, State and/or Federal funds or property, or to protect persons from

injury. Such termination or suspension shall be effective upon receipt of notice of either suspension or termination by the successful Responder. In the case of a suspension under this paragraph, the notice of suspension shall be accompanied by instructions from the City of Chelsea specifying requisite actions by the successful Responder to remove the suspension, proposed timetable for meeting those requirements and a description by the City of Chelsea of allowable activities and costs, if any, during the suspension period. Failure by the successful Responder to remedy the stated deficiencies according to the timetable prescribed by the City of Chelsea shall be cause for immediate termination.

- **Elimination or Reduction of Funding:** In the event of a reduction of funding for any reason, the City of Chelsea may terminate any contract resulting from this Invitation for Bids by providing notice of termination in a reasonable time. The City of Chelsea may provide a conditional notice of termination with a proposed amendment to the subject contract. Any such notice shall provide that the subject contract will terminate automatically 30 calendar days after the date of the conditional notice of termination unless the successful Responder submits to the City of Chelsea a properly signed copy of the amendment, or such modification form of amendment as may be agreeable to the City of Chelsea, within 20 calendar days after the date of the conditional notice of termination, or such other time as it is otherwise specified in the conditional notice.
- **Office's Remedies:** Upon Termination for Cause or for Emergencies: Notwithstanding the terms contained in this section, in the event of termination, the successful Responder shall not be relieved of liability to the City of Chelsea by virtue of any breach of any contract resulting from this Invitation for Bids by the successful Responder. In the event of termination pursuant to this section, the City of Chelsea may withhold any payments to the successful Responder for the purpose of set-off until such time as the exact amount of damages due to the City of Chelsea from the successful Responder is determined. In addition to and notwithstanding the above, the successful Responder covenants and agrees that in the event of termination of any contract resulting from this Invitation for Bids the successful Responder shall pay to the City of Chelsea as damages: (a) such sum as, at the time of termination, the City of Chelsea reasonably determines that is, shall require to compensate a subsequent contractor to complete the delivery of service, and (b) the sum, reasonably determined by the City of Chelsea, which will compensate the City of Chelsea for all the direct and indirect costs resulting from delay in the delivery of services upon the successful Responder's default. The successful Responder further covenants and agrees with the City of Chelsea that the successful Responder shall pay all of the City of Chelsea's costs and expenses (including attorney's fees) incurred or paid in obtaining and enforcing any court order favorable to the City of Chelsea for any obligation of the successful Responder under any contract resulting from this Invitation for Bids.

2.13 Obligation in the Event of Termination

Upon termination of any contract resulting from this Invitation for Bids, all documents finished or unfinished, data, studies and reports prepared by the successful Responder pursuant to the subject contract shall become the property of the City of Chelsea. Copies of finished and unfinished documents, data, studies and reports generated as a necessary part of performing the subject contract shall be delivered to the City of Chelsea upon reasonable request and shall be retained by the successful Responder for future use. The City of Chelsea shall promptly pay the successful Responder for all services performed and for all costs and un-cancelable commitments reasonably incurred in performance of the subject contract to the effective date of termination, provided the successful Responder is not in default of the terms of the subject contract and submits to the City of Chelsea properly completed invoices with supporting documentation covering such services no later than 45 days after the effective date of termination, and that the successful Responder make every reasonable effort to minimize or recover costs incurred.

2.14 Ownership of Furnishings & Equipment

Unless otherwise provided by law or a federal grant award, title to all furnishings and equipment provided by the City of Chelsea or that the awarded Responder provides under the terms of this Invitation for Bids and paid for with public funds, shall vest in and be retained by the City of Chelsea. Upon completion of performance of the awarded Responder's contract, the awarded Responder shall return such furnishings and equipment in its possession in the same condition as at the commencement of any contract resulting from this Invitation for Bids, normal wear and tear excepted.

2.15 Anti-Boycott Warranty

During the term of any contract resulting from this Invitation for Bids, neither the successful Responder nor any "affiliated company" as hereafter described, shall participate in or cooperate with an international boycott, as defined in section 999(b) (3) and (4) of the Internal revenue Code of 1954, as amended by the Tax Reform Act of 1986, or engage on conduct declared to be unlawful by sections 2 and 4 of Chapter 151E of The Massachusetts General Laws. As used herein, an "affiliated company" shall be any business entity or which at least 51% of the ownership interests are directly or indirectly owned by the successful responder or by a person or persons or business entity or entities which directly own at least 51% of the ownership interest of the successful Responder.

2.16 Tied Bids

In the event that there is a tie bid between two (2) responsive and responsible bidders, the award of the contract will be determined by a coin toss. The bidder's whose submission was received earliest shall be assigned "Heads" in the coin toss. In the event that there is a tie bid with three (3) or more responsive and responsible bidders, the award shall be made by a draw by lot limited to those bidders. The coin toss/draw by lot shall be

scheduled within two (2) business days from when it was determined by the Town to be a tie bid. The bidders involved shall be given an opportunity to attend. The coin toss/drawing shall be witnessed by at least three (3) Town officials. The tie breaker event shall be held at Chelsea City Hall during regular business hours.

2.17 Unexpected Closures or Delays

If, at the time of the scheduled bid submission deadline, the designated location for delivery of the bid is closed due to uncontrolled events such as fire, snow, ice, wind, building evacuation or other, the deadline will be postponed until 11:00 a.m. on the next normal business day. Bids will be accepted at the same location until that date and time.

End of Section

Section 3 Responder's Bid Information

3.1 Bidder Communications

Responders are prohibited from communicating directly with any employee of the Purchasing Department and any other member of the City of Chelsea except as specified in this Invitation for Bids, and no other individual City of Chelsea employee or representative is authorized to provide any information or respond to any question or inquiry concerning this Invitation for Bids. Responders may contact the person identified on the cover sheet of this Invitation for Bids in the event this Invitation for Bids is incomplete.

3.2 Reasonable Accommodation

Responders with disabilities or hardships that seek reasonable accommodation, which may include the receipt of the Invitation for Bids information in an alternative format, must communicate such requests in writing, via electronic mail (e-mail) to the contact person. Requests for accommodation will be addressed on a case by case basis. A Responder requesting accommodation must submit a written statement, via e-mail which describes the responder's disability and the requested accommodation to the contact person for the Invitation for Bids. The City of Chelsea reserves the right to reject unreasonable request.

3.3 Public Records

All bids and information submitted in response to this Invitation for Bids are subject to the Massachusetts Public Record Law, M.G.L., Chapter 66, Section 10, and to Chapter 4, Section 2, and Subsection 26. Any statements in the Responder's bid inconsistent with these statutes will be disregarded.

3.4 Brand Name or Equal

Unless otherwise specified in this Invitation for Bids, any reference to a particular trademark, trade name, patent, design, type, specification, producer or supplier is not intended to restrict this Invitation for Bids to any manufacturer or proprietor or to constitute an endorsement of any good or service, and the City of Chelsea must consider clearly identified offers if substantially equivalent goods and services submitted in response to such reference.

3.5 Publicity

Any Responder awarded a contract under this Invitation for Bids is prohibited from selling or distributing any information collected or derived from the contract, including lists of participating or eligible departments, employee names, telephone numbers, e-mail

addresses, addresses or any other reports or information except as specifically authorized under this contract.

3.6 Costs

Costs for services that are not specifically identified in the Responder's response and identified as part of a contract, will not be compensated under any contract awarded pursuant to this Invitation for Bids.

The City of Chelsea will not be responsible for any costs or expenses incurred by responders responding to this Invitation for Bids.

3.7 Required Contract Attachments

All Responders are required to complete, sign and return at minimum the following documents:

- 1.) **Bid Information**- to be included as cover page of bid
- 2.) **Certificate of Non-Collusion**- Signature required
- 3.) **Statement of Corporate Authority (If Responder is a Corporation)** - If the Responder is a Corporation, a vote of the Corporation approving participation in this Invitation for Bids process must be signed by the corporate officers with the Corporate Seal Affixed and attached to the original Invitation for Bids.

If the Responder is a Corporation, the names and addresses of the corporate Officers and the state and date of incorporation must be included. The Responder must state if the Corporation is publicly held or privately held. If the Corporation is publicly held, the exchange on which it is traded and the symbol under which it is traded is required.

Sole Proprietorship (If Responder is a Sole Proprietorship)- If the Responder is a Sole Proprietorship, a partnership or any other legal business entity, the names and addresses of the officers must be included, the parent state of business and the numbers of years this entity has been in business. In short, a complete business profile must be included in the bid.

- 4.) **Bid Pricing Form** - Signature required
- 5.) **Reference Form**- To include three current contract references, at least one of which is a government agency that can be contacted during the IFB process. Two of the references must be customers for which the Responder is or has provided services similar to those outlined in the Scope of Services of the IFB. Include customer name, contact person, his/her title, address and telephone number.

Do not use the names of relatives or City Employees as references. Do not use any previous City contracts as a source of project reference information. You may use previous City contracts as a record of your experience only

- 6.) **OSHA Compliance Certification** - Signature required

3.8 Submitted Responses

The City of Chelsea shall be under no obligation to return any responses or materials submitted by the Responder in response to this Invitation for Bids. All materials submitted by Responders become the property of the City of Chelsea and will not be returned to the Responder. The City of Chelsea has the right to use any ideas, concepts or configurations that are presented in the Responder's bid whether or not the bid is selected for contract award.

3.9 Clarification of Response

The City of Chelsea is not required to seek clarification of responses; therefore, the responder should be as clear as possible in all of its responses to this Invitation for Bids.

3.10 Evaluation and Award of Contract

All pricing must remain constant for the entire term of the contract, as well as any possible extension offered. Bids will be evaluated and awarded based upon the lowest, responsive and eligible bid.

3.11 Rejection of Responder's Bid

A Responder's bid may be rejected by the City of Chelsea if the Responder's bid:

- Fails to adhere to one or more of the requirements
- Fails to submit its bid to the required address on or before the Invitation for Bid responses due date
- Fails to submit a bid in accordance to the format and instructions specified or to supply the minimum information requested in this Invitation for Bids.
- Fails to meet unconditionally or is unable to demonstrate competence to meet the requirements of this Invitation for Bids.
- Misrepresents its equipment, systems or services or provides demonstrably false information in its response or fails to provide material information.
- Violates the restrictions on contacts with the City of Chelsea employees and representatives
- Refuses, is unable to, or fails to provide clarification requested by the City of Chelsea in a reasonable time frame.

3.12 Invitation for Bids Cancellation

The City of Chelsea retains the right to cancel this Invitation for Bids, or any portion thereof, at any time prior to the execution and approval of a contract. If this Invitation for Bids is cancelled, all responses received to this Invitation for Bids will be rejected. All expenses related to the preparation of responses to this Invitation for Bids remain the responsibility of the Responder.

3.13 No Guarantee of Purchase

The City of Chelsea makes no guarantee that any purchase shall take place from any contract resulting from this Invitation for Bids nor does the City of Chelsea guarantee any minimum quantity of purchases from any contract resulting from this Invitation for Bids. Any estimated or past procurement volumes referenced in this Invitation for Bids are included only for the convenience of the Responders, and not to be relied upon as any indication of future purchases.

The Responder may not place, as a condition for providing the cost levels proposed, any minimum purchase requirements.

3.14 Prime Contractors and Subcontractors

Prior approval of the eligible entity is required for any subcontracted service of the contract. Contractors are responsible for the satisfactory performance and adequate oversight of its subcontractors. Subcontractors are required to meet the same state and federal financial program and reporting requirements and are held to the same reimbursable cost standards as the successful Responder.

The City of Chelsea requires a single point of contact for any contract resulting from this Invitation for Bids. Subcontractors may be used, but the successful Responder, as prime contractors, shall be responsible for meeting all of the terms of any contract resulting from this Invitation for Bids and must accept full responsibility for any subcontractor's performance.

Responders must provide a list of subcontractors, a description of each subcontractor's responsibility in regards to this contract and signed letters of agreement between the Responder as the prime contractor, and its subcontractor(s) identifying their responsibilities and their relationship to the prime contractor. The prime contractor must notify each individual account (eligible entity) in writing; the name of their subcontractor both initially and when a sub-contractor is changed. If a subcontractor has filed for Chapter 11 Bankruptcy or Chapter 7 Bankruptcy, the prime contractor also must notify the City of Chelsea. The notification must be written and must be within one week of the events noted above.

3.15 Written Inquires

Responders may submit written inquiries concerning any part or attachment of this Invitation for Bids. Written inquiries regarding issues outside of the scope of this Invitation for Bids will not be considered.

All inquiries must be submitted by the required date and time, to the contact listed on the cover page of this Invitation for Bids.

All written inquiries must be submitted via electronic mail (email) only. No other manner of submission will be accepted.

Any change to this submission date and/or time will be made by a notice sent electronically to all Responders. The Responder is responsible for confirming receipt of written inquiries with Dylan Cook, Chief Procurement Officer, and City of Chelsea at dcook@chelseama.gov.

The City of Chelsea will provide written responses via electronic mail (e-mail) to all written inquiries received by the required due date. Responses will not identify the inquiry by Responder.

3.16 Instructions for Submission of IFB Responses

Each Invitation for Bid Response must be sealed, labeled and submitted to the address listed on the cover page of this document.

Paper Submission- the Responder must submit one (1) original response to the Invitation for Bids marked "ORIGINAL" The Envelope must be clearly marked "**Chelsea High School Interior Renovations**".

3.17 Deadline for Submission

All responses to this Invitation for Bids are due at the address listed on the cover page and no later than the date and time listed in the Procurement Calendar.

End of Section

Section 4 Scope of Services – High School Interior Renovations

SECTION 011000 - SUMMARY

PART 2 - GENERAL

2.1 RELATED DOCUMENTS

- A. General provisions of the Contract, including General and Supplementary Conditions, and MGL Chapter 149, and all applicable building codes apply to this Section.
- B. The latest revision or version of codes and standards referenced within the Contract Specification Section shall be used.

2.2 PROJECT INFORMATION

- A. Project Identification:
 - 1. Project Location: 299 Everett Ave., Chelsea Massachusetts, 02150.
 - 2. Owner: Chelsea Public Schools, 500 Broadway, Chelsea, MA 02150.
- B. Engineer Identification: The Contract Documents were prepared for the Project by Jacobs Project Management Company, 343 Congress Street, Boston, Massachusetts, 02210.
- C. Construction Manager: Construction Manager for this Project and shall be Project's Constructor. The terms "Construction Manager" and "Contractor" are synonymous.
- D. Project Coordinator: Mr. Joseph Cooney, Director of Facilities Management, Chelsea Public Schools, or his appointee for the Project Coordinator.

2.3 WORK COVERED BY CONTRACT DOCUMENTS

In general, the work-- per design drawings provided along with this summary of work-- shall consist of but NOT BE LIMITED to the following narrative:

- Green Building Administrative Suite on the first floor:
 - Create two new private offices within the existing open office space
 - Provide doors and side-lites to match existing in the suite; contractor shall be responsible for visiting the site and making certain of scope of work involved in matching existing materials and finishes prior to submitting a bid on the project.
 - Provide all new finishes to match existing unless otherwise noted: ceilings, light fixtures, fire alarm, speakers, baseboard, doors, site-lites, paint, carpet tiles, etc.
 - Mechanical work: new supply and return, new baseboard heating system addition to new room, reconfiguration of existing in open office space.
 - Electrical Work per bid drawings and specs
 - New sprinklers and adjusting of existing sprinkler heads per new layout
 - Commissioning to ensure proper function of all new components of contract prior to closing out.

- Classroom on second floor to be split into two classrooms:

- Create two new classrooms within the existing open space
- Provide new door from corridor to new classroom; remove existing lockers
- Provide all new finishes to match existing unless otherwise noted: ceilings, light fixtures, fire alarm, speakers, baseboard, doors, site-lites, paint, carpet tiles, etc.
- Mechanical work: reconfiguration of existing per new layout
- Electrical Work per bid drawings and specs; existing projector shall be relocated, and new classroom shall have power and data for new projector.
- New sprinklers and or adjusting of existing sprinkler heads per new layout
- Commissioning to ensure proper function of all new components of contract prior to closing out.

2.4 WORK SEQUENCE AND SCHEDULE

- A. The Construction Schedule shall be based on the work being completed by September 30, 2016, or other date as agreed to by the Director of Facilities Management for the Chelsea School Department.
- B. Contractor shall submit a schedule for each Phase of the Work indicating scheduled completion of work and identifying these intermediate milestones:
 - a. Start of Project Construction.
 - b. Delivery of Submittals.
 - c. Delivery of major equipment.
 - d. Completion of new installations.
 - e. Testing and commissioning.
 - f. Project Completion/Closeout.
- C. The construction schedule shall reflect these milestone dates:
 - a. Construction site staging.
 - b. Equipment delivery schedule.
 - c. Start of demolition and construction activity.
 - d. Completion of new installation.
 - e. Completion of all related HVAC / Electrical / Fire Protection / Finish work.
 - f. Inspection by City Building Inspector.
 - g. Project Completion/Closeout.

2.5 USE OF PREMISES/PERMITS/FEES

- A. General: Contractor will have limited use of premises for construction operations during construction period.
- B. Specific areas for staging and storage of construction materials will be identified by the Project Coordinator. Storage of materials shall be in contractor furnished locked containers. No additional charges will be accepted for lost or stolen material and tools.
- C. Contractor is advised that school MAY BE in session and work will be accomplished during normal school activities unless otherwise advised. No disruption, interruption, or any other contractor activity, including lifting and

rigging operations, will adversely affect school operations. Contractor shall provide security for his tools, consumables, and to the various work areas during the period of construction.

- D. Contractor is advised that the school is located in a residential/commercial section of the city and vehicular access may at times become congested and/or difficult. The movement of any specialty equipment may require movement in off-peak hours and the use of premium labor. Scheduled completion of the various phases of the work may also require premium time. Contractor shall schedule this work accordingly.
- E. Contractor shall be responsible for providing dumpster for the project, and shall NOT rely on the school's dumpster. Any cost for dumping debris from the project shall be the sole responsibility of the contractor.
- F. Contractor is also advised the work present some challenges for accessing the High School during normal business hours. All damages and repairs to existing facilities, as a result of lifting, rigging and related construction activities, shall be repaired to the Owners satisfaction, and shall be the responsibility of the Contractor.

- F. Contractor shall obtain all permits and pay all fees to facilitate movement of any lift equipment and related lifting activities, including, but not limited to, City of Chelsea Police Department Traffic Details.

1.6 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications per each trade found on within the bid set of drawings
 - 1. Section Identification: The Specifications are included as part of the Contract Documents. Each discipline of building design provided specifications; however, the information may be incomplete due to need for contractor to verify existing condition or get approval for purchase and or installation. Contractor shall verify all field condition prior to demolition/construction.
 - 2. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 3. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.

4. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words “shall,” “shall be,” or “shall comply with,” depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.7 SUBMITTALS

- A. Five (5) copies of each submittal, as required by these specifications, shall be delivered for review by the Engineer / Architect. All submittals shall conform to the format as specified herein.
- B. Submittals shall be in a bound format, with a title page indicating the Project Identification, submittal title and specification reference.
- C. Submittals shall be made to expedite material and equipment delivery. No claim for delay will be entertained due to drawing submittal review.
- D. Payment will be made on a monthly basis predicated on Engineers / Architects and Owners representative review of the work and timely receipt of Shop drawings. Delays in receipt of shop drawings will be cause for delays in payment for work completed. Contractor is advised that his work will be accomplished “At Risk” without Engineer approved shop drawings.

PART 3 - PRODUCTS (Not Used)

PART 4 - EXECUTION (Not Used)

End of Section

Bidder Information Form

Bid for **Chelsea High School Interior Renovations**
(To be first page of Bid)

Name of Company:

Address:

Telephone #:

Fax #:

Email Contact:

Is the Company a:

Corporation ____

Partnership ____

Sole Proprietorship ____

Publicly Held ____

Privately Held ____

Names and address of the Principals, Owners, Directors, Officers:

Signature of authorizing party

CITY OF CHELSEA

REQUIRED BID SUBMITTAL FORM

Certificate of Non-Collusion

The undersigned certifies under the penalties of perjury that this proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this Certification the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club or other organization, entity or group of individuals.

Signature

Date

Name (Please Print)

Title

Company

Address

Contact Number

CITY OF CHELSEA

REQUIRED BID SUBMITTAL FORM

STATEMENT OF CORPORATE AUTHORITY

REQUIRED (IF CORPORATION) IF A CORPORATION, COMPLTE BELOW OR ATTACH TO EACH SIGNED COPYOF THE BID A NOTORIZED COPY OF VOTE OF CORPORATION AUTHORIZING THE SIGNATORY TO SIGN THIS CONTRACT. IF ATTESTING CLERK IS THE SAME PERSON AS THE INDIVIDUAL EXECUTING THIS CONTRACT, HAVE SIGNATURE NOTORIZED ABOVE.

At a duly authorized meeting of the Board of Directors of _____ held
on _____ Name of Corporation
Date

at which time all voted that _____
Name Officer

of this Company, be and hereby is authorized to execute contracts and bonds in the name and behalf of said Company, and affix its Corporate Seal thereto, and such execution of any contract of obligation in this Company's name on its behalf by such person _____ under seal of the Company, shall be valid and binding upon this company.

A TRUE COPY,

ATTEST: _____
Clerk

PLACE OF BUSINESS: _____

DATE OF THIS BID: _____

I hereby certify that I am the Clerk of the _____

_____ and that _____ is

duly elected _____ of said Company, and that the above vote has not been amended or rescinded and remains in full force and effect as of the date of this contract.

(Clerk's Signature)

(CORPORATE SEAL)

On this _____ day of _____, 2016, before me, the undersigned notary public, personally appeared _____, proved to me through satisfactory evidence of identification, which were _____ to be the person whose name is signed on the preceding or attached document in my presence.

Notary Public - My Commission Expires:

**CITY OF CHELSEA
REQUIRED BID SUBMITTAL FORM**

Bid Form: Chelsea High School Interior Renovations

To The Awarding Authority:

- A. The undersigned proposes to furnish all labor and materials required for the City of Chelsea in Chelsea, Massachusetts in accordance with the Contract Documents for the **Chelsea High School Interior Renovations**, for the contract price specified below.
- B. This bid includes addenda number(s) _____.
- C. The subdivision of the proposed Contract Price is as follows:
(Bidder: insert words and numbers. In cases of conflict between words and numbers, the words shall control).

Description and Amount in words	Amount in Figures
<p style="font-size: 1.2em; margin: 0;">Lump Sum Bid</p> <hr style="border: 1px solid black; margin: 10px 0;"/> <p style="font-size: 0.8em; margin: 0;">Lump Sum Bid Price (words)</p>	<hr style="border: 1px solid black; margin: 10px 0;"/> <p style="font-size: 0.8em; margin: 0;">(figures)</p>

Company Name: _____

Company Address: _____

Telephone Number: _____ Fax Number: _____

Signature: _____

Print Name: _____ Date: _____

In conjunction with the words, and figures submitted above for the requisite bid items, and an integral part of said bid submission, the undersigned certifies that:

The undersigned declares that the only persons or parties interested in his/her bid as principals area as stated; that the bid is made without any collusion with other persons, firms, or corporations; that he/she has carefully examined all the Contract Documents and has informed him/herself fully in regard to all conditions pertaining to the work and based on this information, the undersigned makes this bid. These prices shall cover all

expenses incurred in performing the work required under the Contract Documents of which this Bid Form is a part.

All responses shall remain open for thirty (30) days, not including Saturdays, Sundays, and legal holidays, after the date of the bid opening.

If a notice of award and three (3) unsigned copies of the Contract (and all other applicable Contract Documents) is delivered to the undersigned within thirty (30) calendar days, not including Saturdays, Sundays, and legal holidays, after the date of receipt of such notification, he/she shall within five (5) days execute and return all copies of the Contract (and all other applicable Contract Documents) to the City. The premiums for all bonds required shall be paid by the Contractor and shall be included in the contract price. The undersigned further agrees that the bid security accompanying this bid shall become the City's property if the Responder fails to execute the Contract as stated above.

Amounts shall be shown in both words and figures, where indicated. In case of discrepancy, the amount shown in words will govern. The above prices shall include all labor, materials, equipment, supervision, transportation, overhead, profit, insurance, and incidentals required to complete the Work.

The undersigned hereby certifies that s/he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the Work.

Furthermore, pursuant to M.G.L., Chapter 62C, Section 49A, I certify under the penalties of perjury that I, to my best knowledge and belief, have filed all state tax returns and paid all state taxes required under the law.

The undersigned under penalties of perjury certifies that this bid is in all respects true, accurate, bonafide, fair, and made without collusion or fraud with any other person. As used in this section, the word "person" shall mean any natural person, joint venture partnership, corporation, or other business or legal entity.

Signed this ____ day_____, 2016.

Social Security Number or
Federal Identification Number

Signature of Individual or
Corporate Name

By: _____
Partner of Corporate

CITY OF CHELSEA
REQUIRED BID SUBMITTAL FORM

REFERENCE FORM

Bidder: _____

Title of Bid: **Chelsea High School Interior Renovations**

Bidder must provide references for:

All contracts performed within the past five years of similar size and scope to this contract

- Reference: _____
- Address: _____
- Contact: _____
- Phone: _____
- Fax: _____
- Description and date(s) of services provided:

- Reference: _____
- Address: _____
- Contact: _____
- Phone: _____
- Fax: _____
- Description and date(s) of services provided:

- Reference: _____
- Address: _____
- Contact: _____
- Phone: _____
- Fax: _____
- Description and date(s) of services provided:

CITY OF CHELSEA

REQUIRED BID SUBMITTAL FORM

OSHA COMPLIANCE CERTIFICATION

Any person submitting a bid for, signing a contract to work on, the construction, reconstruction, alteration, remodeling or repair of any building or public works project undertaken by a public awarding authority in Massachusetts and estimated to cost more than \$10,000 must certify on the bid or contract, under penalties of perjury, as follows:

1. That he is able to furnish labor than can work in harmony with all other elements of labor employed or to be employed at the work
2. All employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and
3. That all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration. (MGL. c. 30, Section 39S (a))

Pursuant to M.G.L. c. 30, Section 39M and M.G.L. c. 149, I certify under penalties of perjury that, to the best of my Knowledge and belief, I am in compliance with the OSHA requirements as stated above.

Dated _____

Name of Company or Corporation

Authorized Official's Signature

BIDDERS/RESPONDENTS MUST SUBMIT THIS FORM FULLY COMPLETED

CONTRACT NO. _____

**CITY OF CHELSEA
CONTRACT FOR SERVICES
over \$10,000**

This agreement (the "Agreement") is made and entered into by and between the City of Chelsea (hereinafter the CITY), a municipal corporation organized and existing under the laws of the Commonwealth of Massachusetts, and

[NAME]
[ADDRESS]
(hereinafter the CONTRACTOR)

For mutual consideration the Parties hereby agree as follows:

ARTICLE 1. DEFINITION.

This CONTRACT as used herein shall consist of this Agreement, and the "contract documents" which include but are not limited to the following identified items and all documents, and forms submitted therewith, or attached hereby.

- Attachment A: Scope of Services, and/or other bid package materials
- Attachment B: Additional Contract Terms and Conditions
- Attachment C: Certificate of Non-Collusion, Tax Compliance Certification, Statement of Corporate Authority
- Attachment D: Summaries of Laws Regarding State Ethics - Acknowledgment of Receipt
- Addenda through #

ARTICLE II. AMOUNT AND TERM.

Pursuant to the terms and conditions stated in the Contract, this CITY agrees to pay an amount not to exceed \$ _____, and the Contractor agrees to perform the services detailed in the Contract. The Contract shall commence on or about _____ (the "Commencing Date") unless earlier terminated pursuant to Article IV, Termination and shall terminate no later than _____, unless a written amendment to renew or extend this contract is executed in accordance with the provisions of this CONTRACT.

ARTICLE III. PERFORMANCE.

The Contractor agrees to provide all goods and/or services set forth in the Invitation for Bid/Request for Proposal Documents, Scope of Service, the Contractor's proposal for " _____ ", and/or as outlined in ATTACHMENT A - SCOPE OF SERVICES.

ARTICLE IV. TERMINATION.

i) Without Cause. The CITY may terminate this CONTRACT on sixty (60) calendar day's notice, or may suspend this CONTRACT for up to sixty (60) calendar days upon receipt of notice, when in the best interests of the CITY, by providing notice to the CONTRACTOR, which shall be in writing and shall be deemed delivered and received when given in person to the CONTRACTOR, or when received by fax, express mail, certified mail return receipt requested,

regular mail postage prepaid or delivered by any other appropriate method evidencing actual receipt by the CONTRACTOR.

ii) For Cause. If the CONTRACTOR is determined by the CITY to be in default of any term or condition of CONTRACT, the CITY may terminate this contract on thirty (30) day's notice by providing notice to the CONTRACTOR, which shall be in writing and shall be deemed delivered and received when given in person to the CONTRACTOR, or when received by fax, express mail, certified mail return receipt requested, regular mail postage prepaid or delivered by any other appropriate method evidencing actual receipt by the CONTRACTOR. If the CITY is determined by the CONTRACTOR to be in default of any term or condition of this CONTRACT the CONTRACTOR may terminate this contract on thirty (30) day's notice by providing notice to the CITY, which shall be in writing and shall be deemed delivered and received when given in person to the CITY, or when received by fax, express mail, certified mail return receipt requested, regular mail postage prepaid or delivered by any other appropriate method evidencing actual receipt by the CITY.

iii) Default. Events of default under this CONTRACT shall include, but are not limited to the following: a) any material misrepresentation made by the CONTRACTOR to the CITY, b) any failure to perform any of its obligations under this CONTRACT including, but not limited to the following: (i) failure to commence performance of this CONTRACT at the time specified in this CONTRACT due to a reason or circumstance within the CONTRACTOR'S reasonable control, (ii) failure to perform this CONTRACT with sufficient personnel and equipment or with sufficient material to ensure the completion of this CONTRACT within the specified time due to a reason or circumstance within the CONTRACTOR'S reasonable control, (iii) failure to perform this CONTRACT in a manner reasonably satisfactory to the CITY, (iv) failure to promptly re-perform with reasonable time the services that were rejected by the CITY as unsatisfactory, or erroneous, (v) discontinuance of the services for reasons not beyond the CONTRACTOR'S reasonable control, (vi) failure to comply with a material term of this CONTRACT, including, but not limited to, the provision of insurance or failure to comply with nondiscrimination provisions, and (vii) any other acts specifically and expressly stated in this CONTRACT as constituting a basis for termination of this CONTRACT, and (viii) failure to comply with any and all requirements of state law, and/or regulations, and City ordinances, and/or regulations.

ARTICLE V. REMEDIES OF THE CITY.

The City hereby retains all remedies in law and equity, including but not limited to, the right to deduct the cost of any substitute contract or performance for expenses, losses, and all damages and the right to withhold from payment, any amounts for expenses, losses, and damages from sums due, or which become due.

ARTICLE VI. REMEDIES OF THE CONTRACTOR.

If the Contractor, due to any act or omission for which the City is legally responsible, sustains damages, other than loss, non-conformance, or non-performance, the Contractor may request, within 30 days of the alleged act or omission from the City, a sum equal to the amount of such damages sustained by the Contractor, which amount may be determined by the City in writing, at the City 's sole discretion, provided that the Contractor has provided to all signatories of this Agreement, a detailed, written statement of such damages and cause thereof within said 30 day period.

ARTICLE VII. ASSIGNABILITY.

The CONTRACTOR shall not assign, subcontract or in any way transfer any interest, rights or obligations in this CONTRACT without the prior written consent of the City Manager. In the

event of such assignment the CITY reserves the right to deal with any assignee subcontractor or transferee directly and the CONTRACTOR agrees to remain bound by all terms and conditions of this CONTRACT in accordance with its original tenor and in no way shall the CONTRACTOR be relieved of its responsibilities and obligations under this CONTRACT. The provisions of this CONTRACT shall be binding upon, and shall inure to the benefit of, the successors and assigns of the CONTRACTOR and any public body or bodies succeeding the interests of the CITY.

ARTICLE VIII. INDEMNIFICATION.

The CONTRACTOR shall assume the defense, indemnify and hold harmless the CITY, the CITY'S agents and employees, from and against all losses and all claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought or recovered against them by reason of acts, in actions, omissions, negligence, reckless or intentional misconduct of the said CONTRACTOR, its agent(s), officers, employees, or subcontractors; in the execution of the work or in guarding the same. Unless otherwise provided by law, the CITY may elect, at its sole discretion, to indemnify the CONTRACTOR for claims arising in tort if it is determined that the CONTRACTOR performed its obligations under this CONTRACT pursuant to the direct supervision and control of the CITY or its designated agent(s).

ARTICLE IX. WORKER'S COMPENSATION AND OTHER INSURANCE.

The CONTRACTOR shall provide insurance for the payment of compensation and the furnishing of other benefits under Chapter 152 of the General Laws of Massachusetts (The Worker's Compensation Act) to all employees of the CONTRACTOR who are subject to the provisions of Chapter 152 of the General Laws of Massachusetts.

Failure to provide and continue in force such insurance during the period of this contract shall be deemed a material breach of this contract, shall operate as an immediate termination thereof, and CONTRACTOR shall indemnify the CITY for all losses, claims, and actions resulting from the failure to provide the insurance required by this Article.

The Contractor shall furnish to the CITY evidence of such insurance prior to the execution of this contract and before the same shall be binding on the parties thereto, except if specifically waived in Attachment B.

Prior to commencement of any work and until completion of its work under this CONTRACT, the CONTRACTOR shall maintain the following insurance coverage, at its cost, from insurance acceptable to the CITY, giving evidence of such coverage to the CITY prior to execution of this CONTRACT, a copy of such insurance coverage to be attached herewith:

1. Comprehensive Automobile Liability Insurance covering the use of all owned, non-owned and hired automobiles in connection with its operations with a combined single limit of \$1,000,000. The comprehensive Automobile Liability insurance may be provided through primary and excess or umbrella insurance policies.
2. CONTRACTOR'S Equipment Coverage (or a certification of self-insurance satisfactory to the CITY) must be provided on an "All Risks" basis, covering physical damage to all tools and equipment, including automotive equipment owned, rented, or used by the CONTRACTOR.
3. Commercial General Liability Insurance coverage which may be provided through primary and excess or umbrella liability policies for limits of \$1,000,000 general aggregate, and \$500,000 per occurrence.

All required insurance must be endorsed to name the CITY as Additional Insured. All required insurance shall be endorsed to waive the insurer's rights of subrogation against the City. All policies and certificates of insurance must contain language that the insurance shall not be canceled, materially changed or non-renewed without at least thirty (30) days advance written notice to the CITY. The CONTRACTOR under this CONTRACT shall not allow its subcontractors to begin work until similar insurance has been so obtained and certificates of insurance approved by the CONTRACTOR.

ARTICLE X. CORPORATE CONTRACTOR.

If CONTRACTOR is a corporation, CONTRACTOR shall endorse the Certificate of Corporate Authority for the CONTRACTORS' signatory (Exhibit C), or shall otherwise provide a form similar in nature and substance acceptable to the CITY at the City's sole discretion.

If CONTRACTOR is a non-profit corporation, CONTRACTOR shall provide satisfactory proof of present status as a non-profit corporation. Such proof shall be in the form of a certification from the Massachusetts Secretary of State's office and/or from the Internal Revenue Service and shall provide the Federal Tax Identification Number of the non-profit corporation. This CONTRACT shall not be enforceable against the CITY unless and until the CONTRACTOR complies with this Article. Failure to inform the CITY in writing of revocation, or other loss of non-profit status shall be deemed a material breach of this contract and operate as an immediate termination thereof.

ARTICLE XI. SUBJECT TO APPROPRIATION.

The obligations of the CITY under this CONTRACT shall be subject to appropriation. In the absence of appropriation this CONTRACT shall be immediately terminated without liability for damages, penalties, or other charges.

In the event any portion of this Agreement is to be funded with alternate funding including but not limited to state, local, federal or private grant funding. In the requisite circumstances, the obligations of the CITY under this CONTRACT shall be subject to the formal award of such state, local, federal or private grant.

ARTICLE XII. DOCUMENTS, MATERIALS, ETC.

Any materials, reports, information, data, etc. given to or prepared or assembled by the CONTRACTOR under this CONTRACT are to be kept confidential and shall not be made available to any individual or organization by the CONTRACTOR (except agents, servants, or employees of the CONTRACTOR) without the prior written approval of the CITY. The CONTRACTOR understands that he/she/it may acquire or have access to "personal data" otherwise kept by the CITY. The CONTRACTOR shall comply with the provisions Chapter 66A of the General Laws of Massachusetts as it relates to public documents, and all other state and federal laws and regulations relating to confidentiality, security, privacy and use of confidential data.

Any materials produced in whole or in part under this CONTRACT shall not be subject to copyright, except by the CITY, in the United States or any other country. The CITY shall have unrestricted authority to, without payment of any royalty, commission, or additional fee of any type or nature, publicly disclose, reproduce, distribute and otherwise use, and authorize other to use, in whole or in part, any reports, data or other materials prepared under this CONTRACT.

All data, reports, programs, software, equipment, furnishings, and any other documentation or product paid for by the CITY shall vest in the CITY at the termination of this CONTRACT. The CONTRACTOR shall at all times, during or after termination of this CONTRACT, obtain the prior written approval of the CITY before making any statement bearing on the work performed or data collected under this CONTRACT to the press or issues any material for publication through any medium.

ARTICLE XIII. AUDIT, INSPECTION, RECORDKEEPING.

At any time during normal business hours, and as often as the CITY may deem it reasonably necessary, there shall be made available in the office of the CONTRACTOR for the purpose of audit, examination, and/or to make excerpts or transcripts, all records, contracts, invoices, materials, payrolls, records of personnel, conditions of employment and other data relating to all matters covered by this agreement.

Further the CONTRACTOR agrees to make its work papers, records and other evidence of audit available to the CITY for a period of three years after final payment under his CONTRACT. The CITY shall be entitled to reproduce any or all such documents at its own expense, for which provision shall be made at such time.

ARTICLE XIV. WEEKLY PAYROLL RECORDS REPORT.

In accordance with Massachusetts General Law c. 149, s. 27B, a true and accurate record must be kept of all individuals employed on a public works construction project for which prevailing wage rates are applicable.

In addition, every contractor and subcontractor is required to submit, on a weekly basis, a copy of their weekly payroll records to the awarding authority. Once collected, the awarding authority is also required to preserve those records for three years.

ARTICLE XV. CONFLICT OF INTEREST.

i) CITY. No officer, member or employee of the CITY and no members of its governing body who exercise any function or responsibility in review or approval of the undertaking or carrying out of this CONTRACT shall participate in any decision relating to the CONTRACT which affects his/her personal interests or the interest of any corporation, partnership, or association in which he/she has a direct or indirect pecuniary interest. None of the services to be provided by the CONTRACTOR shall be used for any partisan political activity or further the election or defeat of any candidate for political office in the CITY. Compliance with this section shall be material to the CONTRACT.

ii) CONTRACTOR. CONTRACTOR agrees that his/her/its agents, servants, and employees have neither presently nor during the period of this CONTRACT any interest direct or indirect which would impair, detract, or conflict in any manner or degree with the performance of services required under this CONTRACT. The CONTRACTOR, his/her/its agents, servants and employees further stipulate that in the performance of this CONTRACT, no person having any such interest shall be employed. Conflicts of Interest include but are not limited to (a) immediate family relationships with officials of the CITY, (b) instances where the CONTRACTOR, his/her/its agents, servants or employees during the period of this CONTRACT was connected as an officer, employee or member of the governing body of the CITY, and (c) instances where the CONTRACTOR has an interest in any CITY department, its agents, servants or employees or parcels of land within the CITY. Compliance with this section shall be material to the CONTRACT. The CONTRACTOR, his/her/its agents, servants and employees must disclose any and all such interests in writing to the CITY.

ARTICLE XVI. PAYMENT.

The City agrees to make all reasonable efforts to pay to the CONTRACTOR the sum set forth any invoice which has been approved by the City Manager or his authorized designee within thirty (30) days of receipt of such invoice at the Office of the City Auditor. Each invoice shall detail the work completed.

Subject to pending statutory appeal rights, the City hereby reserves the right and the CONTRACTOR hereby agrees that the City may deduct from the sum(s) otherwise payable under this CONTRACT any outstanding taxes, fines, fees and/or other municipal charges prior to disbursement to the CONTRACTOR.

ARTICLE XVII. CONFLICT.

In the event there is a conflict between these Articles and Attachment A, Attachment A shall supersede these Articles.

ARTICLE XVIII. WAIVER AND AMENDMENT.

The provisions contained in this CONTRACT may be modified only by the express written consent of the Parties. Any amendments, must be made only by written amendment executed by all signatories to the original agreement, prior to the effective date of the amendment.

The failure of any party to insist on the strict performance of any term, covenant or condition to this CONTRACT, at anytime, or in any one or more instances, or its failure to take advantage of any of its rights, or any course of conduct or dealing, shall not be construed as a waiver or a relinquishment of any such rights or conditions at any future time and shall, in no way act, as a wavier by any party of a breach of another party or have any affect on the continuance of or the full force and affect of any or all of the provisions of this Contract. The waiver of any provisions must be in writing and executed by all signatories to this Agreement prior to the force and effect of any such waiver.

Forbearance or indulgence in any form or manner by a party shall not be construed as a waiver, nor in any manner limit the legal or equitable remedies available to that party. No waiver by either party of any default or breach shall constitute a waiver of any subsequent default or breach of a similar or different matter.

ARTICLE XIX. CERTIFICATION.

IN WITNESS WHEREOF, THE CONTRACTOR CERTIFIES, UNDER THE PAINS AND PENALTIES OF PERJURY, THAT THE CONTRACTOR IS IN COMPLIANCE WITH EACH OF THE FOLLOWING:

- a. TAXES. PURSUANT to M.G.L. c. 62C, s. 49A, the CONTRACTOR has filed all state tax returns and complied with all laws of the Commonwealth relating to taxes.
- b. DEBARMENT. The CONTRACTOR is not currently debarred or suspended by the Commonwealth of Massachusetts, or any of its entities or subdivisions.
- c. AMERICANS WITH DISABILITIES ACT. The CONTRACTOR is aware of the Americans with Disabilities Act which prohibits discrimination based upon disability and shall meet any relevant standards, and/or conditions set out in the bid/proposal documents, bid/proposal specifications, and/or ATTACHMENT A - SCOPE OF SERVICES.

ARTICLE XX. FORUM AND CHOICE OF LAW

This CONTRACT and any performance herein shall be governed by and be construed in accordance with the laws of Commonwealth of Massachusetts, exclusive of its conflicts of law provisions. Any and all proceedings or actions relating to subject matter herein shall be brought and maintained in the courts of the Commonwealth of Massachusetts or the federal district court sitting in the Commonwealth of Massachusetts, which shall have exclusive jurisdiction thereof. Each of the Parties hereto irrevocably consents to and waives any objection to the exercise of personal jurisdiction by the state and federal courts of the Commonwealth of Massachusetts. This paragraph shall not be construed to limit any other legal rights of the parties.

ARTICLE XXI. TAXES

CONTRACTOR shall be solely responsible for the payment of any taxes, levies, betterments or assessments, fees or charges, whether in existence on the date hereof or becoming applicable pursuant to this Contract, which may be assessed against the CONTRACTOR or the CITY which are directly attributable to CONTRACTOR'S activities under this CONTRACT (the "Taxes"). CONTRACTOR shall pay all Taxes directly to the taxing authority before delinquency and before any fine, interest or penalty shall become due or be imposed by operation of law for their nonpayment.

ARTICLE XXII. NOTICES

All notices, demands, requests, consents, approvals and other instruments required or permitted to be given pursuant to the terms hereof (hereinafter "Notice"), shall be in writing and shall be deemed to have been properly given when delivered in hand or deposited in registered or certified United States mail, postage prepaid, return receipt requested, addressed, as described herein or when delivered by messenger or overnight mail service to the correct addressee. Unless otherwise specified, Notice shall be deemed received when actually received or when the proffered Notice has been refused by the Addressee. The signature of an employee, servant or agent of the Addressee shall be determinative on the issue of actual receipt.

All notices shall be sent to the persons and addresses listed below. CONTRACTOR and the CITY shall, at any time and from time to time, have the right to specify as their proper addresses for purposes of this CONTRACT any other address or addresses giving fifteen (15) days' written notice thereof to the other party.

All Notices shall be forwarded to:

FOR THE CITY
Thomas G. Ambrosino, City Manager
500 Broadway
City Hall
Chelsea, MA 02150

With a Copy to:
Cheryl Watson Fisher
City Solicitor
Law Department, Room 307
500 Broadway
Chelsea, MA 02150

FOR THE CONTRACTOR:
[NAME]
[ADDRESS]

ARTICLE XXIII. CONSIDERATION

The Parties mutually agree to enter into this CONTRACT for good and valuable consideration.

ARTICLE XXIV. REPRESENTATIONS AND WARRANTIES OF THE CONTRACTOR

The CONTRACTOR represents and warrants (i) the CONTRACTOR has all requisite corporate power and authority to enter into this CONTRACT and to perform the obligations of the CONTRACTOR; (ii) that this CONTRACT has been duly and validly authorized, executed and delivered by the CONTRACTOR; (iii) the execution and delivery of this CONTRACT does not violate or conflict with any other agreement, license or obligation; (iv) the CONTRACTOR is duly organized, legal and validly existing and in good standing in the Commonwealth of Massachusetts; (v) that the CONTRACTOR is duly qualified and authorized to do business in the Commonwealth of Massachusetts; (vi) the CONTRACTOR is in compliance and is current with any payments under all federal, state and local tax laws; (vii) the CONTRACTOR will obtain any and all permits which may be necessary to perform the obligations of this CONTRACT; (viii) the CONTRACTOR will timely perform its obligations required by this CONTRACT.

ARTICLE XXV. THIRD PARTY BENEFICIARIES

This CONTRACT shall not be construed to create any third party beneficiary rights in favor of any other parties or any right or privilege for the benefit of any other parties.

ARTICLE XXVI. ENTIRE CONTRACT

This CONTRACT constitutes the entire Agreement of the parties hereto with respect to the subject matter hereof, and no representations, inducements, promises, or agreements, oral or otherwise, between the parties hereto with respect to the subject matter hereof not embodied herein shall be of any force or effect.

ARTICLE XXVII. LIABILITY OF MUNICIPALITY

The CITY shall not be liable to CONTRACTOR for any loss of business or any indirect, incidental, special, consequential or exemplary damages or lost profits unless expressly specified herein.

ARTICLE XXVIII. HEADINGS

Heading used in this Agreement are for convenience of reference only and shall not be construed as altering the meaning of this CONTRACT or any of its provisions.

ARTICLE XXIX. DAYS

Any reference to "days" in this CONTRACT, shall be deemed to mean business days (Monday through Friday, excluding generally recognized holidays) except where specific reference is made to calendar days.

ARTICLE XXX. SURVIVAL

The parties agree that the provisions of ARTICLE II – AMOUNT AND TERM; ARTICLE III – PERFORMANCE; ARTICLE V- REMEDIES OF THE CITY; ARTICLE VI- REMEDIES OF THE CONTRACTOR. ARTICLE VII – ASSIGNABILITY; ARTICLE VIII – INDEMNIFICATION; ARTICLE IX- WORKER’S COMPENSATION AND OTHER INSURANCE; ARTICLE XI-SUBJECT TO APPROPRIATION; ARTICLE XII – DOCUMENTS, MATERIALS, ETC; ARTICLE XIII – AUDIT, INSPECTION, RECORDKEEPING; ARTICLE XIV- WEEKLY PAYROLL RECORDS REPORT; ARTICLE XVI – PAYMENT; ARTICLE XVIII – WAIVER AND AMENDMENT; ARTICLE XIX –

CERTIFICATION; ARTICLE XX- FORUM AND CHOICE OF LAW; ARTICLE XXI – TAXES; ARTICLE XXIV- REPRESENTATIONS AND WARRANTIES OF THE CONTRACTOR; ARTICLE XXVII- LIABILITY OF THE MUNICIPALITY; ARTICLE XXX – SURVIVAL; and ARTICLE XXXI - SEVERABILITY shall survive the expiration or any earlier termination of this CONTRACT.

ARTICLE XXXI. SEVERABILITY

If any provision of this CONTRACT is held to be illegal, invalid or unenforceable, the remaining terms shall not be affected and shall remain in full force and effect. The Agreement shall be interpreted as if the illegal, invalid or unenforceable provision had not been included in it and the invalid or unenforceable provision shall be stricken and shall be replaced by a mutually acceptable provision which being valid and enforceable comes closest to the intention of the parties with respect to the invalid or unenforceable provision.

ARTICLE XXXII. ADVICE AND COUNSEL

The CONTRACTOR hereby acknowledges and agrees that CONTRACTOR has read this Agreement in its entirety and that CONTRACTOR has had the opportunity to consult legal and financial advisors of their choosing regarding the execution, delivery and performance of their obligations, hereunder.

ARTICLE XXXIII. COUNTERPARTS

This CONTRACT may be executed in counterpart.

THE REMAINDER OF THIS PAGE LEFT INTENTIONALLY BLANK

IN WITNESS WHEREOF the parties have hereto and to three other identical instruments set forth their hands the day and year first above written.

THE CONTRACTOR

CITY MANAGER

Company Name

Thomas G. Ambrosino, City Manager

Status (Corporation/Non-corporate)

Signature & Title

Please Print Name & Title

Dylan Cook
Chief Procurement Officer

Date

Taxpayer Identification Number

APPROVED AS TO FORM:

Cheryl Watson Fisher
City Solicitor

Approved as to Contract Manager:

I CERTIFY THAT FUNDS HAVE BEEN
ENCUMBERED IN THE AMOUNT OF
\$_____ FOR THIS CONTRACT
Appropriation Number:

Department Head Name
Department Name
City of Chelsea

Edward M. Dunn
City Auditor

ATTACHMENT A

SCOPE OF SERVICES

INSTRUCTIONS FOR DEPARTMENT AND CONTRACTOR: Please attach for reference purposes a copy of all bid/proposal documents, including but not limited to (i) invitations/instructions for bidders (ii) invitation/instructions for proposers, (iii) general and specific conditions, and please provide a detailed description of all types of goods and/or services that will be provided pursuant to this CONTRACT, not otherwise provided in any bid/proposal instructions, specifications, conditions or other documents.

ATTACHMENT B

ADDITIONAL CONTRACT TERMS AND CONDITIONS

INSTRUCTIONS FOR DEPARTMENTS: Please specify any additions or modifications to the terms and conditions (not to conflict with the public procurement laws or City ordinances or regulations:

ATTACHMENT C

CERTIFICATE OF NON-COLLUSION

TAX COMPLIANCE CERTIFICATION

STATEMENT OF CORPORATE AUTHORITY

CERTIFICATE OF NON-COLLUSION
MANDATORY

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Dated: _____

Name of Company or Corporation

Authorized Official's Signature

BIDDERS/RESPONDENTS MUST SUBMIT THIS FORM FULLY COMPLETED.

TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. c. 62C, Section 49A, I certify under penalties of perjury that I, to my best knowledge and belief, have filed all Massachusetts tax returns and paid all Massachusetts taxes required under law, as well as paid all contributions and payments in lieu of contributions pursuant to M.G.L., c. 151A, Section 19A(b).

I further certify that I have complied with all federal, state and local laws relating to taxes, including but not limited to the withholding and reporting of any income taxes for employees and contractors, and the withholding and remittance of child support.

Signature

Social Security or Federal ID No.

Date

BIDDERS/RESPONDENTS MUST SUBMIT THIS FORM FULLY COMPLETED.

STATEMENT OF CORPORATE AUTHORITY

At a duly authorized meeting of the Board of Directors of _____

held on _____ at which time all voted that _____

of this Company, be and hereby is authorized to execute contracts and bonds in the name and on behalf of said Company, and affix its Corporate seal thereto, and such execution of any contract

of obligation in this Company's name on its behalf by such person _____ under seal of the Company, shall be valid and binding upon this Company.

A TRUE COPY,
ATTEST:

PLACE OF BUSINESS:

DATE OF THIS CONTRACT:

I hereby certify that I am Clerk of _____ and that

_____ is duly elected _____

of said Company, and that the above vote has not been amended or rescinded and remains in full force and effect as of the date of this contract.

(Clerk's Signature)

(CORPORATE SEAL)

ATTACHMENT D

City of Chelsea
Conflict of Interest Law
Compliance Statement and Requirements for Vendors

On July 1, 2009, the Legislature enacted Chapter 28 of the Acts of 2009 which made changes to Mass. General Laws c. 268A and c. 268B, the Massachusetts' Conflict of Interest Law. On November 9, 2009, the Chelsea City Council designated the Chelsea City Solicitor as the Municipal Liaison to the State Ethics Commission and responsible for the facilitation of Chelsea's obligation to comply with the changes in the law.

The City has a requirement for compliance, which is to make sure that all municipal elected officials, board and commission members, and employees **including vendors** are provided copies of the Summaries of the Ethics Laws.

Enclosed is a packet that should be copied and provide to each one of your employees who are assigned to work in Chelsea; including yourself. At the end of the summary is an acknowledgement of receipt of the summary. The acknowledgments must be submitted along with any purchase order or contract with the City of Chelsea. All documents pursuant to this new law will be kept on file in the City Clerk's Office

The Procurement Officer will contact you directly, if there is a determination that you or your staff should undergo the Conflict of Interest Online Training Program.

If you have any questions, feel free to contact the Chelsea City Solicitor at 617-466-4150 as soon as possible.

Summary of the Conflict of Interest Law for Municipal Employees

This summary of the conflict of interest law, General Laws chapter 268A, is intended to help municipal employees understand how that law applies to them. This summary is not a substitute for legal advice, nor does it mention every aspect of the law that may apply in a particular situation. Municipal employees can obtain free confidential advice about the conflict of interest law from the Commission's Legal Division at our website, phone number, and address above. Municipal counsel may also provide advice.

The conflict of interest law seeks to prevent conflicts between private interests and public duties, foster integrity in public service, and promote the public's trust and confidence in that service by placing restrictions on what municipal employees may do on the job, after hours, and after leaving public service, as described below. The sections referenced below are sections of G.L. c. 268A.

When the Commission determines that the conflict of interest law has been violated, it can impose a civil penalty of up to \$10,000 (\$25,000 for bribery cases) for each violation. In addition, the Commission can order the violator to repay any economic advantage he gained by the violation, and to make restitution to injured third parties. Violations of the conflict of interest law can also be prosecuted criminally.

I. Are you a municipal employee for conflict of interest law purposes?

You do not have to be a full-time, paid municipal employee to be considered a municipal employee for conflict of interest purposes. Anyone performing services for a city or town or holding a municipal position, whether paid or unpaid, including full- and part-time municipal employees, elected officials, volunteers, and consultants, is a municipal employee under the conflict of interest law. An employee of a private firm can also be a municipal employee, if the private firm has a contract with the city or town and the employee is a "key employee" under the contract, meaning the town has specifically contracted for her services. The law also covers private parties who engage in impermissible dealings with municipal employees, such as offering bribes or illegal gifts.

II. On-the-job restrictions.

(a) Bribes. Asking for and taking bribes is prohibited. (See Section 2)

A bribe is anything of value corruptly received by a municipal employee in exchange for the employee being influenced in his official actions. Giving, offering, receiving, or asking for a bribe is illegal.

Bribes are more serious than illegal gifts because they involve corrupt intent. In other words, the municipal employee intends to sell his office by agreeing to do or not do some official act, and the giver intends to influence him to do so. Bribes of any value are illegal.

(b) Gifts and gratuities. Asking for or accepting a gift because of your official position, or because of something you can do or have done in your official position, is prohibited. (See Sections 3, 23(b)(2), and 26)

Municipal employees may not accept gifts and gratuities valued at \$50 or more given to influence their official actions or because of their official position. Accepting a gift intended to reward past official action or to bring about future official action is illegal, as is giving such gifts. Accepting a gift given to you because of the municipal position you hold is also illegal. Meals, entertainment event tickets, golf, gift baskets, and payment of travel expenses can all be illegal gifts if given in connection with official action or position, as can anything worth \$50 or more. A number of smaller gifts together worth \$50 or more may also violate these sections.

Example of violation : A town administrator accepts reduced rental payments from developers.

Example of violation : A developer offers a ski trip to a school district employee who oversees the developer's work for the school district.

Regulatory exemptions . There are situations in which a municipal employee's receipt of a gift does not present a genuine risk of a conflict of interest, and may in fact advance the public interest. The Commission has created exemptions permitting giving and receiving gifts in these situations. One commonly used exemption permits municipal employees to accept payment of travel-related expenses when doing so advances a public purpose. Another commonly used exemption permits municipal employees to accept payment of costs involved in attendance at educational and training programs. Other exemptions are listed on the Commission's website.

Example where there is no violation : A fire truck manufacturer offers to pay the travel expenses of a fire chief to a trade show where the chief can examine various kinds of fire-fighting equipment that the town may purchase. The chief fills out a disclosure form and obtains prior approval from his appointing authority.

Example where there is no violation : A town treasurer attends a two-day annual school featuring multiple substantive seminars on issues relevant to treasurers. The annual school is paid for in part by banks that do business with town treasurers. The treasurer is only required to make a disclosure if one of the sponsoring banks has official business before her in the six months before or after the annual school.

(c) Misuse of position. Using your official position to get something you are not entitled to, or to get someone else something they are not entitled to, is prohibited. Causing someone else to do these things is also prohibited. (See Sections 23(b)(2) and 26)

A municipal employee may not use her official position to get something worth \$50 or more that would not be properly available to other similarly situated individuals. Similarly, a municipal employee may not use her official position to get something worth \$50 or more for someone else

that would not be properly available to other similarly situated individuals. Causing someone else to do these things is also prohibited.

Example of violation : A full-time town employee writes a novel on work time, using her office computer, and directing her secretary to proofread the draft.

Example of violation : A city councilor directs subordinates to drive the councilor's wife to and from the grocery store.

Example of violation : A mayor avoids a speeding ticket by asking the police officer who stops him, "Do you know who I am?" and showing his municipal I.D.

(d) Self-dealing and nepotism. Participating as a municipal employee in a matter in which you, your immediate family, your business organization, or your future employer has a financial interest is prohibited. (See Section 19)

A municipal employee may not participate in any particular matter in which he or a member of his immediate family (parents, children, siblings, spouse, and spouse's parents, children, and siblings) has a financial interest. He also may not participate in any particular matter in which a prospective employer, or a business organization of which he is a director, officer, trustee, or employee has a financial interest. Participation includes discussing as well as voting on a matter, and delegating a matter to someone else.

A financial interest may create a conflict of interest whether it is large or small, and positive or negative. In other words, it does not matter if a lot of money is involved or only a little. It also does not matter if you are putting money into your pocket or taking it out. If you, your immediate family, your business, or your employer have or has a financial interest in a matter, you may not participate. The financial interest must be direct and immediate or reasonably foreseeable to create a conflict. Financial interests which are remote, speculative or not sufficiently identifiable do not create conflicts.

Example of violation : A school committee member's wife is a teacher in the town's public schools. The school committee member votes on the budget line item for teachers' salaries.

Example of violation : A member of a town affordable housing committee is also the director of a non-profit housing development corporation. The non-profit makes an application to the committee, and the member/director participates in the discussion.

Example : A planning board member lives next door to property where a developer plans to construct a new building. Because the planning board member owns abutting property, he is presumed to have a financial interest in the matter. He cannot participate unless he provides the

State Ethics Commission with an opinion from a qualified independent appraiser that the new construction will not affect his financial interest.

In many cases, where not otherwise required to participate, a municipal employee may comply with the law by simply not participating in the particular matter in which she has a financial interest. She need not give a reason for not participating.

There are several exemptions to this section of the law. An appointed municipal employee may file a written disclosure about the financial interest with his appointing authority, and seek permission to participate notwithstanding the conflict. The appointing authority may grant written permission if she determines that the financial interest in question is not so substantial that it is likely to affect the integrity of his services to the municipality. Participating without disclosing the financial interest is a violation. Elected employees cannot use the disclosure procedure because they have no appointing authority.

Example where there is no violation : An appointed member of the town zoning advisory committee, which will review and recommend changes to the town's by-laws with regard to a commercial district, is a partner at a company that owns commercial property in the district. Prior to participating in any committee discussions, the member files a disclosure with the zoning board of appeals that appointed him to his position, and that board gives him a written determination authorizing his participation, despite his company's financial interest. There is no violation.

There is also an exemption for both appointed and elected employees where the employee's task is to address a matter of general policy and the employee's financial interest is shared with a substantial portion (generally 10% or more) of the town's population, such as, for instance, a financial interest in real estate tax rates or municipal utility rates.

(e) False claims. Presenting a false claim to your employer for a payment or benefit is prohibited, and causing someone else to do so is also prohibited. (See Sections 23(b)(4) and 26)

A municipal employee may not present a false or fraudulent claim to his employer for any payment or benefit worth \$50 or more, or cause another person to do so.

Example of violation : A public works director directs his secretary to fill out time sheets to show him as present at work on days when he was skiing.

(f) Appearance of conflict. Acting in a manner that would make a reasonable person think you can be improperly influenced is prohibited. (See Section 23(b)(3))

A municipal employee may not act in a manner that would cause a reasonable person to think that she would show favor toward someone or that she can be improperly influenced. Section 23(b)(3) requires a municipal employee to consider whether her relationships and affiliations could prevent her from acting fairly and objectively when she performs her duties for a city or town. If she cannot be fair and objective because of a relationship or affiliation, she should not perform her duties. However, a municipal employee, whether elected or appointed, can avoid violating this provision by making a public disclosure of the facts. An appointed employee must make the disclosure in writing to his appointing official.

Example where there is no violation : A developer who is the cousin of the chair of the conservation commission has filed an application with the commission. A reasonable person could conclude that the chair might favor her cousin. The chair files a written disclosure with her appointing authority explaining her relationship with her cousin prior to the meeting at which the application will be considered. There is no violation of Sec. 23(b)(3).

(g) Confidential information. Improperly disclosing or personally using confidential information obtained through your job is prohibited. (See Section 23(c))

Municipal employees may not improperly disclose confidential information, or make personal use of non-public information they acquired in the course of their official duties to further their personal interests.

III. After-hours restrictions.

(a) Taking a second paid job that conflicts with the duties of your municipal job is prohibited. (See Section 23(b)(1))

A municipal employee may not accept other paid employment if the responsibilities of the second job are incompatible with his or her municipal job.

Example : A police officer may not work as a paid private security guard in the town where he serves because the demands of his private employment would conflict with his duties as a police officer.

(b) Divided loyalties. Receiving pay from anyone other than the city or town to work on a matter involving the city or town is prohibited. Acting as agent or attorney for anyone other

than the city or town in a matter involving the city or town is also prohibited whether or not you are paid. (See Sec. 17)

Because cities and towns are entitled to the undivided loyalty of their employees, a municipal employee may not be paid by other people and organizations in relation to a matter if the city or town has an interest in the matter. In addition, a municipal employee may not act on behalf of other people and organizations or act as an attorney for other people and organizations in which the town has an interest. Acting as agent includes contacting the municipality in person, by phone, or in writing; acting as a liaison; providing documents to the city or town; and serving as spokesman.

A municipal employee may always represent his own personal interests, even before his own municipal agency or board, on the same terms and conditions that other similarly situated members of the public would be allowed to do so. A municipal employee may also apply for building and related permits on behalf of someone else and be paid for doing so, unless he works for the permitting agency, or an agency which regulates the permitting agency.

Example of violation : A full-time health agent submits a septic system plan that she has prepared for a private client to the town's board of health.

Example of violation : A planning board member represents a private client before the board of selectmen on a request that town meeting consider rezoning the client's property.

While many municipal employees earn their livelihood in municipal jobs, some municipal employees volunteer their time to provide services to the town or receive small stipends. Others, such as a private attorney who provides legal services to a town as needed, may serve in a position in which they may have other personal or private employment during normal working hours. In recognition of the need not to unduly restrict the ability of town volunteers and part-time employees to earn a living, the law is less restrictive for "special" municipal employees than for other municipal employees.

The status of "special" municipal employee has to be assigned to a municipal position by vote of the board of selectmen, city council, or similar body. A position is eligible to be designated as "special" if it is unpaid, or if it is part-time and the employee is allowed to have another job during normal working hours, or if the employee was not paid for working more than 800 hours during the preceding 365 days. It is the position that is designated as "special" and not the person or persons holding the position. Selectmen in towns of 10,000 or fewer are automatically "special"; selectman in larger towns cannot be "specials."

If a municipal position has been designated as "special," an employee holding that position may be paid by others, act on behalf of others, and act as attorney for others with respect to matters before municipal boards other than his own, provided that he has not officially participated in the

matter, and the matter is not now, and has not within the past year been, under his official responsibility.

Example : A school committee member who has been designated as a special municipal employee appears before the board of health on behalf of a client of his private law practice, on a matter that he has not participated in or had responsibility for as a school committee member. There is no conflict. However, he may not appear before the school committee, or the school department, on behalf of a client because he has official responsibility for any matter that comes before the school committee. This is still the case even if he has recused himself from participating in the matter in his official capacity.

Example : A member who sits as an alternate on the conservation commission is a special municipal employee. Under town by-laws, he only has official responsibility for matters assigned to him. He may represent a resident who wants to file an application with the conservation commission as long as the matter is not assigned to him and he will not participate in it.

(c) Inside track. Being paid by your city or town, directly or indirectly, under some second arrangement in addition to your job is prohibited, unless an exemption applies. (See Section 20)

A municipal employee generally may not have a financial interest in a municipal contract, including a second municipal job. A municipal employee is also generally prohibited from having an indirect financial interest in a contract that the city or town has with someone else. This provision is intended to prevent municipal employees from having an "inside track" to further financial opportunities.

Example of violation : Legal counsel to the town housing authority becomes the acting executive director of the authority, and is paid in both positions.

Example of violation : A selectman buys a surplus truck from the town DPW.

Example of violation : A full-time secretary for the board of health wants to have a second paid job working part-time for the town library. She will violate Section 20 unless she can meet the requirements of an exemption.

Example of violation : A city councilor wants to work for a non-profit that receives funding under a contract with her city. Unless she can satisfy the requirements of an exemption under Section 20, she cannot take the job.

There are numerous exemptions. A municipal employee may hold multiple unpaid or elected positions. Some exemptions apply only to special municipal employees. Specific exemptions may cover serving as an unpaid volunteer in a second town position, housing-related benefits, public safety positions, certain elected positions, small towns, and other specific situations. Please call the Ethics Commission's Legal Division for advice about a specific situation.

IV. After you leave municipal employment. (See Section 18)

(a) Forever ban. After you leave your municipal job, you may never work for anyone other than the municipality on a matter that you worked on as a municipal employee.

If you participated in a matter as a municipal employee, you cannot ever be paid to work on that same matter for anyone other than the municipality, nor may you act for someone else, whether paid or not. The purpose of this restriction is to bar former employees from selling to private interests their familiarity with the facts of particular matters that are of continuing concern to their former municipal employer. The restriction does not prohibit former municipal employees from using the expertise acquired in government service in their subsequent private activities.

Example of violation : A former school department employee works for a contractor under a contract that she helped to draft and oversee for the school department.

(b) One year cooling-off period. For one year after you leave your municipal job you may not participate in any matter over which you had official responsibility during your last two years of public service.

Former municipal employees are barred for one year after they leave municipal employment from personally appearing before any agency of the municipality in connection with matters that were under their authority in their prior municipal positions during the two years before they left.

Example : An assistant town manager negotiates a three-year contract with a company. The town manager who supervised the assistant, and had official responsibility for the contract but did not participate in negotiating it, leaves her job to work for the company to which the contract was awarded. The former manager may not call or write the town in connection with the company's work on the contract for one year after leaving the town.

A former municipal employee who participated as such in general legislation on expanded gaming and related matters may not become an officer or employee of, or acquire a financial interest in, an applicant for a gaming license, or a gaming licensee, for one year after his public employment ceases.

(c) Partners. Your partners will be subject to restrictions while you serve as a municipal employee and after your municipal service ends.

Partners of municipal employees and former municipal employees are also subject to restrictions under the conflict of interest law. If a municipal employee participated in a matter, or if he has official responsibility for a matter, then his partner may not act on behalf of anyone other than the municipality or provide services as an attorney to anyone but the city or town in relation to the matter.

Example: While serving on a city's historic district commission, an architect reviewed an application to get landmark status for a building. His partners at his architecture firm may not prepare and sign plans for the owner of the building or otherwise act on the owner's behalf in relation to the application for landmark status. In addition, because the architect has official responsibility as a commissioner for every matter that comes before the commission, his partners may not communicate with the commission or otherwise act on behalf of any client on any matter that comes before the commission during the time that the architect serves on the commission.

Example: A former town counsel joins a law firm as a partner. Because she litigated a lawsuit for the town, her new partners cannot represent any private clients in the lawsuit for one year after her job with the town ended.

* * * * *

This summary is not intended to be legal advice and, because it is a summary, it does not mention every provision of the conflict law that may apply in a particular situation. Our website, <http://www.mass.gov/ethics> contains further information about how the law applies in many situations. You can also contact the Commission's Legal Division via our website, by telephone, or by letter. Our contact information is at the top of this document.

Version 5: Revised December 23, 2011

City of Chelsea
Conflict of Interest Law

Compliance Statement and Requirements for Vendors

ACKNOWLEDGMENT OF RECEIPT

I, _____,
(first and last name)

an employee at _____,
(name of vendor)

Hereby acknowledge that I received a copy of the summary of the conflict of interest law for municipal employees, revised December 23, 2011, on

_____.
(date)

The City has a requirement for compliance, which is to make sure that all **vendors** are provided copies of the Summary of the Conflict of Interest Law for Municipal Employees (including Vendors).

VENDORS should copy the Summary of the Conflict of Interest Law and provide it to each one of the employees who are assigned to work in Chelsea.

Each employee shall complete the "Acknowledgment of Receipt" and the Vendor shall return the acknowledgments-only (not the Summary) to the Chelsea the Chelsea Procurement Office.

The "Acknowledgment of Receipt" must be submitted along with any purchase order or contract with the City of Chelsea



**THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS**

Prevailing Wage Rates

**As determined by the Director under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H**

RONALD L. WALKER, II
Secretary

WILLIAM D MCKINNEY
Director

CHARLES D. BAKER
Governor

KARYN E. POLITO
Lt. Governor

Awarding Authority: City of Chelsea
Contract Number: 2016-133 **City/Town:** CHELSEA
Description of Work: Interior renovations at Chelsea high school, converting office space into classroom space
Job Location: 299 Everett Ave, Chelsea

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the “Wage Request Number” on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule from the Department of Labor Standards (“DLS”) if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- All apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentice must keep his/her apprentice identification card on his/her person during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **If an apprentice rate is not listed on the prevailing wage schedule for the trade in which an apprentice is registered with the DAS, the apprentice must be paid the journeyworker's rate for the trade.**
- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule. Awarding authorities are required to request these updates no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CM AT RISK projects, awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. Contractors are required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The annual update requirement is not applicable to 27F “rental of equipment” contracts.
- Every contractor or subcontractor which performs construction work on the project is required to submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee’s name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. A sample of a payroll reporting form may be obtained at <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may report the violation to the Fair Labor Division of the office of the Attorney General at (617) 727-3465.
- Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$32.75	\$10.41	\$10.08	\$0.00	\$53.24
	06/01/2016	\$33.25	\$10.41	\$10.08	\$0.00	\$53.74
	08/01/2016	\$33.25	\$10.91	\$10.08	\$0.00	\$54.24
	12/01/2016	\$33.25	\$10.91	\$10.89	\$0.00	\$55.05
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$32.82	\$10.41	\$10.08	\$0.00	\$53.31
	06/01/2016	\$33.32	\$10.41	\$10.08	\$0.00	\$53.81
	08/01/2016	\$33.32	\$10.91	\$10.08	\$0.00	\$54.31
	12/01/2016	\$33.32	\$10.91	\$10.89	\$0.00	\$55.12
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$32.94	\$10.41	\$10.08	\$0.00	\$53.43
	06/01/2016	\$33.44	\$10.41	\$10.08	\$0.00	\$53.93
	08/01/2016	\$33.44	\$10.91	\$10.08	\$0.00	\$54.43
	12/01/2016	\$33.44	\$10.91	\$10.89	\$0.00	\$55.24
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$88.29	\$9.80	\$19.23	\$0.00	\$117.32
AIR TRACK OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.10	\$7.45	\$13.55	\$0.00	\$57.10
	06/01/2016	\$36.85	\$7.45	\$13.55	\$0.00	\$57.85
	12/01/2016	\$37.85	\$7.45	\$13.55	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	12/01/2015	\$34.38	\$10.40	\$5.95	\$0.00	\$50.73
ASPHALT RAKER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.10	\$7.45	\$13.55	\$0.00	\$57.10
	06/01/2016	\$36.85	\$7.45	\$13.55	\$0.00	\$57.85
	12/01/2016	\$37.85	\$7.45	\$13.55	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2016	\$41.62	\$6.97	\$16.21	\$0.00	\$64.80
	01/01/2017	\$42.92	\$6.97	\$16.21	\$0.00	\$66.10

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$27.05	\$6.97	\$10.54	\$0.00	\$44.56
2	65	\$27.05	\$6.97	\$10.54	\$0.00	\$44.56
3	70	\$29.13	\$6.97	\$11.35	\$0.00	\$47.45
4	75	\$31.22	\$6.97	\$12.16	\$0.00	\$50.35
5	80	\$33.30	\$6.97	\$12.97	\$0.00	\$53.24
6	85	\$35.38	\$6.97	\$13.78	\$0.00	\$56.13
7	90	\$37.46	\$6.97	\$14.59	\$0.00	\$59.02
8	95	\$39.54	\$6.97	\$15.40	\$0.00	\$61.91

Effective Date - 01/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$27.90	\$6.97	\$10.54	\$0.00	\$45.41
2	65	\$27.90	\$6.97	\$10.54	\$0.00	\$45.41
3	70	\$30.04	\$6.97	\$11.35	\$0.00	\$48.36
4	75	\$32.19	\$6.97	\$12.16	\$0.00	\$51.32
5	80	\$34.34	\$6.97	\$12.97	\$0.00	\$54.28
6	85	\$36.48	\$6.97	\$13.78	\$0.00	\$57.23
7	90	\$38.63	\$6.97	\$14.59	\$0.00	\$60.19
8	95	\$40.77	\$6.97	\$15.40	\$0.00	\$63.14

Notes:

Apprentice to Journeyworker Ratio:1:5

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	02/01/2016	\$49.86	\$10.18	\$19.14	\$0.00	\$79.18
BRICKLAYERS LOCAL 3 (BOSTON)	08/01/2016	\$50.76	\$10.18	\$19.22	\$0.00	\$80.16
	02/01/2017	\$51.33	\$10.18	\$19.22	\$0.00	\$80.73

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 Boston

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.93	\$10.18	\$19.14	\$0.00	\$54.25
2	60	\$29.92	\$10.18	\$19.14	\$0.00	\$59.24
3	70	\$34.90	\$10.18	\$19.14	\$0.00	\$64.22
4	80	\$39.89	\$10.18	\$19.14	\$0.00	\$69.21
5	90	\$44.87	\$10.18	\$19.14	\$0.00	\$74.19

Effective Date - 08/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.38	\$10.18	\$19.22	\$0.00	\$54.78
2	60	\$30.46	\$10.18	\$19.22	\$0.00	\$59.86
3	70	\$35.53	\$10.18	\$19.22	\$0.00	\$64.93
4	80	\$40.61	\$10.18	\$19.22	\$0.00	\$70.01
5	90	\$45.68	\$10.18	\$19.22	\$0.00	\$75.08

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
CAISSON & UNDERPINNING BOTTOM MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2015	\$36.45	\$7.45	\$13.75	\$0.00	\$57.65
	06/01/2016	\$37.20	\$7.45	\$13.75	\$0.00	\$58.40
	12/01/2016	\$38.20	\$7.45	\$13.75	\$0.00	\$59.40
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2015	\$35.30	\$7.45	\$13.75	\$0.00	\$56.50
	06/01/2016	\$36.05	\$7.45	\$13.75	\$0.00	\$57.25
	12/01/2016	\$37.05	\$7.45	\$13.75	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2015	\$35.30	\$7.45	\$13.75	\$0.00	\$56.50
	06/01/2016	\$36.05	\$7.45	\$13.75	\$0.00	\$57.25
	12/01/2016	\$37.05	\$7.45	\$13.75	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS -ZONE 1 (Metro Boston)</i>	03/01/2015	\$42.30	\$9.80	\$16.48	\$0.00	\$68.58

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CARPENTER - Zone 1 Metro Boston

Effective Date - 03/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.15	\$9.80	\$1.63	\$0.00	\$32.58
2	60	\$25.38	\$9.80	\$1.63	\$0.00	\$36.81
3	70	\$29.61	\$9.80	\$11.59	\$0.00	\$51.00
4	75	\$31.73	\$9.80	\$11.59	\$0.00	\$53.12
5	80	\$33.84	\$9.80	\$13.22	\$0.00	\$56.86
6	80	\$33.84	\$9.80	\$13.22	\$0.00	\$56.86
7	90	\$38.07	\$9.80	\$14.85	\$0.00	\$62.72
8	90	\$38.07	\$9.80	\$14.85	\$0.00	\$62.72

Notes:

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING BRICKLAYERS LOCAL 3 (BOSTON)	01/01/2016	\$46.44	\$10.90	\$18.71	\$1.30	\$77.35
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Apprentice - CEMENT MASONRY/PLASTERING - Eastern Mass (Boston)

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.22	\$10.90	\$12.21	\$0.00	\$46.33
2	60	\$27.86	\$10.90	\$13.71	\$1.30	\$53.77
3	65	\$30.19	\$10.90	\$14.71	\$1.30	\$57.10
4	70	\$32.51	\$10.90	\$15.71	\$1.30	\$60.42
5	75	\$34.83	\$10.90	\$16.71	\$1.30	\$63.74
6	80	\$37.15	\$10.90	\$17.71	\$1.30	\$67.06
7	90	\$41.80	\$10.90	\$18.71	\$1.30	\$72.71

Notes:

Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR LABORERS - ZONE 1	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES OPERATING ENGINEERS LOCAL 4	12/01/2015	\$44.73	\$10.00	\$14.90	\$0.00	\$69.63
	06/01/2016	\$45.48	\$10.00	\$14.90	\$0.00	\$70.38
	12/01/2016	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	06/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
	12/01/2017	\$48.73	\$10.00	\$14.90	\$0.00	\$73.63

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$30.13	\$10.00	\$14.90	\$0.00	\$55.03
	06/01/2016	\$30.65	\$10.00	\$14.90	\$0.00	\$55.55
	12/01/2016	\$31.52	\$10.00	\$14.90	\$0.00	\$56.42
	06/01/2017	\$32.21	\$10.00	\$14.90	\$0.00	\$57.11
	12/01/2017	\$32.90	\$10.00	\$14.90	\$0.00	\$57.80

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 1</i>	01/01/2016	\$49.51	\$7.85	\$16.10	\$0.00	\$73.46
	07/01/2016	\$50.46	\$7.85	\$16.10	\$0.00	\$74.41
	01/01/2017	\$51.41	\$7.85	\$16.10	\$0.00	\$75.36

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.76	\$7.85	\$0.00	\$0.00	\$32.61
2	55	\$27.23	\$7.85	\$3.66	\$0.00	\$38.74
3	60	\$29.71	\$7.85	\$3.99	\$0.00	\$41.55
4	65	\$32.18	\$7.85	\$4.32	\$0.00	\$44.35
5	70	\$34.66	\$7.85	\$14.11	\$0.00	\$56.62
6	75	\$37.13	\$7.85	\$14.44	\$0.00	\$59.42
7	80	\$39.61	\$7.85	\$14.77	\$0.00	\$62.23
8	90	\$44.56	\$7.85	\$15.44	\$0.00	\$67.85

Effective Date - 07/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.23	\$7.85	\$0.00	\$0.00	\$33.08
2	55	\$27.75	\$7.85	\$3.66	\$0.00	\$39.26
3	60	\$30.28	\$7.85	\$3.99	\$0.00	\$42.12
4	65	\$32.80	\$7.85	\$4.32	\$0.00	\$44.97
5	70	\$35.32	\$7.85	\$14.11	\$0.00	\$57.28
6	75	\$37.85	\$7.85	\$14.44	\$0.00	\$60.14
7	80	\$40.37	\$7.85	\$14.77	\$0.00	\$62.99
8	90	\$45.41	\$7.85	\$15.44	\$0.00	\$68.70

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.50	\$7.45	\$13.55	\$0.00	\$56.50
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For apprentice rates see "Apprentice- LABORER"

DEMO: BACKHOE/LOADER/HAMMER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.50	\$7.45	\$13.55	\$0.00	\$57.50
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For apprentice rates see "Apprentice- LABORER"

DEMO: BURNERS <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.25	\$7.45	\$13.55	\$0.00	\$57.25
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For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: CONCRETE CUTTER/SAWYER <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.50	\$7.45	\$13.55	\$0.00	\$57.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.25	\$7.45	\$13.55	\$0.00	\$57.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.50	\$7.45	\$13.55	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$58.86	\$9.80	\$19.23	\$0.00	\$87.89
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$42.04	\$9.80	\$19.23	\$0.00	\$71.07
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$63.06	\$9.80	\$19.23	\$0.00	\$92.09
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$88.23	\$9.80	\$19.23	\$0.00	\$117.26
DRAWBRIDGE OPERATOR (Construction) <i>ELECTRICIANS LOCAL 103</i>	09/01/2015	\$45.67	\$13.00	\$15.89	\$0.00	\$74.56
	03/01/2016	\$46.17	\$13.00	\$16.39	\$0.00	\$75.56
For apprentice rates see "Apprentice- ELECTRICIAN"						
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	09/01/2015	\$45.67	\$13.00	\$15.89	\$0.00	\$74.56
	03/01/2016	\$46.17	\$13.00	\$16.39	\$0.00	\$75.56

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ELECTRICIAN - Local 103

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.27	\$13.00	\$0.55	\$0.00	\$31.82
2	40	\$18.27	\$13.00	\$0.55	\$0.00	\$31.82
3	45	\$20.55	\$13.00	\$11.86	\$0.00	\$45.41
4	45	\$20.55	\$13.00	\$11.86	\$0.00	\$45.41
5	50	\$22.84	\$13.00	\$12.23	\$0.00	\$48.07
6	55	\$25.12	\$13.00	\$12.58	\$0.00	\$50.70
7	60	\$27.40	\$13.00	\$12.95	\$0.00	\$53.35
8	65	\$29.69	\$13.00	\$13.32	\$0.00	\$56.01
9	70	\$31.97	\$13.00	\$13.69	\$0.00	\$58.66
10	75	\$34.25	\$13.00	\$14.06	\$0.00	\$61.31

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.47	\$13.00	\$0.55	\$0.00	\$32.02
2	40	\$18.47	\$13.00	\$0.55	\$0.00	\$32.02
3	45	\$20.78	\$13.00	\$11.84	\$0.00	\$45.62
4	45	\$20.78	\$13.00	\$11.84	\$0.00	\$45.62
5	50	\$23.09	\$13.00	\$12.71	\$0.00	\$48.80
6	55	\$25.39	\$13.00	\$13.07	\$0.00	\$51.46
7	60	\$27.70	\$13.00	\$13.39	\$0.00	\$54.09
8	65	\$30.01	\$13.00	\$13.81	\$0.00	\$56.82
9	70	\$32.32	\$13.00	\$14.18	\$0.00	\$59.50
10	75	\$34.63	\$13.00	\$14.55	\$0.00	\$62.18

Notes :
 App Prior 1/1/03; 30/35/40/45/50/55/65/70/75/80

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR	01/01/2016	\$54.53	\$14.43	\$14.96	\$0.00	\$83.92
ELEVATOR CONSTRUCTORS LOCAL 4	01/01/2017	\$55.86	\$15.28	\$15.71	\$0.00	\$86.85

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ELEVATOR CONSTRUCTOR - Local 4

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.27	\$14.43	\$0.00	\$0.00	\$41.70
2	55	\$29.99	\$14.43	\$14.96	\$0.00	\$59.38
3	65	\$35.44	\$14.43	\$14.96	\$0.00	\$64.83
4	70	\$38.17	\$14.43	\$14.96	\$0.00	\$67.56
5	80	\$43.62	\$14.43	\$14.96	\$0.00	\$73.01

Effective Date - 01/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.93	\$15.28	\$0.00	\$0.00	\$43.21
2	55	\$30.72	\$15.28	\$15.71	\$0.00	\$61.71
3	65	\$36.31	\$15.28	\$15.71	\$0.00	\$67.30
4	70	\$39.10	\$15.28	\$15.71	\$0.00	\$70.09
5	80	\$44.69	\$15.28	\$15.71	\$0.00	\$75.68

Notes:
Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

Apprentice to Journeyworker Ratio:1:1

ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2016	\$38.17	\$14.43	\$14.96	\$0.00	\$67.56
	01/01/2017	\$39.10	\$15.28	\$15.71	\$0.00	\$70.09
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2015	\$40.49	\$10.00	\$14.55	\$0.00	\$65.04
	05/01/2016	\$41.38	\$10.00	\$14.55	\$0.00	\$65.93
	11/01/2016	\$41.97	\$10.00	\$14.55	\$0.00	\$66.52
	05/01/2017	\$42.85	\$10.00	\$14.55	\$0.00	\$67.40
	11/01/2017	\$43.58	\$10.00	\$14.55	\$0.00	\$68.13
	05/01/2018	\$44.29	\$10.00	\$14.55	\$0.00	\$68.84
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2015	\$41.93	\$10.00	\$14.55	\$0.00	\$66.48
	05/01/2016	\$42.82	\$10.00	\$14.55	\$0.00	\$67.37
	11/01/2016	\$43.42	\$10.00	\$14.55	\$0.00	\$67.97
	05/01/2017	\$44.31	\$10.00	\$14.55	\$0.00	\$68.86
	11/01/2017	\$45.04	\$10.00	\$14.55	\$0.00	\$69.59
	05/01/2018	\$45.76	\$10.00	\$14.55	\$0.00	\$70.31
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2015	\$21.71	\$10.00	\$14.55	\$0.00	\$46.26
	05/01/2016	\$22.23	\$10.00	\$14.55	\$0.00	\$46.78
	11/01/2016	\$22.58	\$10.00	\$14.55	\$0.00	\$47.13
	05/01/2017	\$23.11	\$10.00	\$14.55	\$0.00	\$47.66
	11/01/2017	\$23.53	\$10.00	\$14.55	\$0.00	\$48.08
	05/01/2018	\$23.96	\$10.00	\$14.55	\$0.00	\$48.51
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	09/01/2015	\$45.67	\$13.00	\$15.89	\$0.00	\$74.56
	03/01/2016	\$46.17	\$13.00	\$16.39	\$0.00	\$75.56
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS LOCAL 103</i>	09/01/2015	\$34.25	\$13.00	\$14.06	\$0.00	\$61.31
	03/01/2016	\$34.63	\$13.00	\$14.55	\$0.00	\$62.18
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$36.34	\$10.00	\$14.90	\$0.00	\$61.24
	06/01/2016	\$36.96	\$10.00	\$14.90	\$0.00	\$61.86
	12/01/2016	\$38.00	\$10.00	\$14.90	\$0.00	\$62.90
	06/01/2017	\$38.84	\$10.00	\$14.90	\$0.00	\$63.74
	12/01/2017	\$39.67	\$10.00	\$14.90	\$0.00	\$64.57
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER <i>LABORERS - ZONE 1</i>	12/01/2015	\$20.50	\$7.45	\$13.55	\$0.00	\$41.50
	06/01/2016	\$20.50	\$7.45	\$13.55	\$0.00	\$41.50
	12/01/2016	\$20.50	\$7.45	\$13.55	\$0.00	\$41.50
For apprentice rates see "Apprentice- LABORER"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE 1</i>	09/01/2015	\$41.59	\$9.80	\$17.53	\$0.00	\$68.92

Apprentice - FLOORCOVERER - Local 2168 Zone 1

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.80	\$9.80	\$1.79	\$0.00	\$32.39
2	55	\$22.87	\$9.80	\$1.79	\$0.00	\$34.46
3	60	\$24.95	\$9.80	\$12.16	\$0.00	\$46.91
4	65	\$27.03	\$9.80	\$12.16	\$0.00	\$48.99
5	70	\$29.11	\$9.80	\$13.95	\$0.00	\$52.86
6	75	\$31.19	\$9.80	\$13.95	\$0.00	\$54.94
7	80	\$33.27	\$9.80	\$15.74	\$0.00	\$58.81
8	85	\$35.35	\$9.80	\$15.74	\$0.00	\$60.89

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FORK LIFT/CHERRY PICKER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATOR/LIGHTING PLANT/HEATERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$30.13	\$10.00	\$14.90	\$0.00	\$55.03
	06/01/2016	\$30.65	\$10.00	\$14.90	\$0.00	\$55.55
	12/01/2016	\$31.52	\$10.00	\$14.90	\$0.00	\$56.42
	06/01/2017	\$32.21	\$10.00	\$14.90	\$0.00	\$57.11
	12/01/2017	\$32.90	\$10.00	\$14.90	\$0.00	\$57.80
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 35 (ZONE 1)</i>	01/01/2016	\$44.80	\$7.85	\$16.10	\$0.00	\$68.75
	07/01/2016	\$45.75	\$7.85	\$16.10	\$0.00	\$69.70
	01/01/2017	\$46.70	\$7.85	\$16.10	\$0.00	\$70.65

Apprentice - GLAZIER - Local 35 Zone 1

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.40	\$7.85	\$0.00	\$0.00	\$30.25
2	55	\$24.64	\$7.85	\$3.66	\$0.00	\$36.15
3	60	\$26.88	\$7.85	\$3.99	\$0.00	\$38.72
4	65	\$29.12	\$7.85	\$4.32	\$0.00	\$41.29
5	70	\$31.36	\$7.85	\$14.11	\$0.00	\$53.32
6	75	\$33.60	\$7.85	\$14.44	\$0.00	\$55.89
7	80	\$35.84	\$7.85	\$14.77	\$0.00	\$58.46
8	90	\$40.32	\$7.85	\$15.44	\$0.00	\$63.61

Effective Date - 07/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.88	\$7.85	\$0.00	\$0.00	\$30.73
2	55	\$25.16	\$7.85	\$3.66	\$0.00	\$36.67
3	60	\$27.45	\$7.85	\$3.99	\$0.00	\$39.29
4	65	\$29.74	\$7.85	\$4.32	\$0.00	\$41.91
5	70	\$32.03	\$7.85	\$14.11	\$0.00	\$53.99
6	75	\$34.31	\$7.85	\$14.44	\$0.00	\$56.60
7	80	\$36.60	\$7.85	\$14.77	\$0.00	\$59.22
8	90	\$41.18	\$7.85	\$15.44	\$0.00	\$64.47

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HOISTING ENGINEER/CRANES/GRADALLS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63

Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$24.05	\$10.00	\$0.00	\$0.00	\$34.05
2	60	\$26.24	\$10.00	\$14.90	\$0.00	\$51.14
3	65	\$28.42	\$10.00	\$14.90	\$0.00	\$53.32
4	70	\$30.61	\$10.00	\$14.90	\$0.00	\$55.51
5	75	\$32.80	\$10.00	\$14.90	\$0.00	\$57.70
6	80	\$34.98	\$10.00	\$14.90	\$0.00	\$59.88
7	85	\$37.17	\$10.00	\$14.90	\$0.00	\$62.07
8	90	\$39.36	\$10.00	\$14.90	\$0.00	\$64.26

Effective Date - 06/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$24.46	\$10.00	\$0.00	\$0.00	\$34.46
2	60	\$26.69	\$10.00	\$14.90	\$0.00	\$51.59
3	65	\$28.91	\$10.00	\$14.90	\$0.00	\$53.81
4	70	\$31.14	\$10.00	\$14.90	\$0.00	\$56.04
5	75	\$33.36	\$10.00	\$14.90	\$0.00	\$58.26
6	80	\$35.58	\$10.00	\$14.90	\$0.00	\$60.48
7	85	\$37.81	\$10.00	\$14.90	\$0.00	\$62.71
8	90	\$40.03	\$10.00	\$14.90	\$0.00	\$64.93

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK) <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2016	\$43.31	\$10.70	\$21.95	\$2.28	\$78.24
	08/01/2016	\$44.46	\$10.70	\$21.95	\$2.28	\$79.39
	02/01/2017	\$45.56	\$10.70	\$21.95	\$2.28	\$80.49
	08/01/2017	\$46.66	\$10.70	\$21.95	\$2.28	\$81.59
	02/01/2018	\$47.81	\$10.70	\$21.95	\$2.28	\$82.74

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) <i>ELECTRICIANS LOCAL 103</i>	09/01/2015	\$45.67	\$13.00	\$15.89	\$0.00	\$74.56
	03/01/2016	\$46.17	\$13.00	\$16.39	\$0.00	\$75.56

For apprentice rates see "Apprentice- ELECTRICIAN"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING - AIR) <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2016	\$43.31	\$10.70	\$21.95	\$2.28	\$78.24
	08/01/2016	\$44.46	\$10.70	\$21.95	\$2.28	\$79.39
	02/01/2017	\$45.56	\$10.70	\$21.95	\$2.28	\$80.49
	08/01/2017	\$46.66	\$10.70	\$21.95	\$2.28	\$81.59
	02/01/2018	\$47.81	\$10.70	\$21.95	\$2.28	\$82.74
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (TESTING AND BALANCING -WATER) <i>PIPEFITTERS LOCAL 537</i>	09/01/2015	\$49.69	\$9.70	\$16.89	\$0.00	\$76.28
	03/01/2016	\$50.69	\$9.70	\$16.89	\$0.00	\$77.28
	09/01/2016	\$51.69	\$9.70	\$16.89	\$0.00	\$78.28
	03/01/2017	\$52.69	\$9.70	\$16.89	\$0.00	\$79.28
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC <i>PIPEFITTERS LOCAL 537</i>	09/01/2015	\$49.69	\$9.70	\$16.89	\$0.00	\$76.28
	03/01/2016	\$50.69	\$9.70	\$16.89	\$0.00	\$77.28
	09/01/2016	\$51.69	\$9.70	\$16.89	\$0.00	\$78.28
	03/01/2017	\$52.69	\$9.70	\$16.89	\$0.00	\$79.28
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.10	\$7.45	\$13.55	\$0.00	\$57.10
	06/01/2016	\$36.85	\$7.45	\$13.55	\$0.00	\$57.85
	12/01/2016	\$37.85	\$7.45	\$13.55	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	09/01/2015	\$43.81	\$11.50	\$13.80	\$0.00	\$69.11
	09/01/2016	\$45.81	\$11.50	\$13.80	\$0.00	\$71.11
	09/01/2017	\$47.81	\$11.50	\$13.80	\$0.00	\$73.11
	09/01/2018	\$50.06	\$11.50	\$13.80	\$0.00	\$75.36
	09/01/2019	\$52.56	\$11.50	\$13.80	\$0.00	\$77.86

Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.91	\$11.50	\$10.05	\$0.00	\$43.46
2	60	\$26.29	\$11.50	\$10.80	\$0.00	\$48.59
3	70	\$30.67	\$11.50	\$11.55	\$0.00	\$53.72
4	80	\$35.05	\$11.50	\$12.30	\$0.00	\$58.85

Effective Date - 09/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.91	\$11.50	\$10.05	\$0.00	\$44.46
2	60	\$27.49	\$11.50	\$10.80	\$0.00	\$49.79
3	70	\$32.07	\$11.50	\$11.55	\$0.00	\$55.12
4	80	\$36.65	\$11.50	\$12.30	\$0.00	\$60.45

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
IRONWORKER/WELDER <i>IRONWORKERS LOCAL 7 (BOSTON AREA)</i>	09/16/2015	\$42.40	\$7.80	\$20.85	\$0.00	\$71.05
	03/16/2016	\$43.40	\$7.80	\$20.85	\$0.00	\$72.05
	09/16/2016	\$44.05	\$7.80	\$20.85	\$0.00	\$72.70
	03/16/2017	\$44.65	\$7.80	\$20.85	\$0.00	\$73.30

Apprentice - IRONWORKER - Local 7 Boston

Effective Date - 09/16/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$25.44	\$7.80	\$20.85	\$0.00	\$54.09
2	70	\$29.68	\$7.80	\$20.85	\$0.00	\$58.33
3	75	\$31.80	\$7.80	\$20.85	\$0.00	\$60.45
4	80	\$33.92	\$7.80	\$20.85	\$0.00	\$62.57
5	85	\$36.04	\$7.80	\$20.85	\$0.00	\$64.69
6	90	\$38.16	\$7.80	\$20.85	\$0.00	\$66.81

Effective Date - 03/16/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$26.04	\$7.80	\$20.85	\$0.00	\$54.69
2	70	\$30.38	\$7.80	\$20.85	\$0.00	\$59.03
3	75	\$32.55	\$7.80	\$20.85	\$0.00	\$61.20
4	80	\$34.72	\$7.80	\$20.85	\$0.00	\$63.37
5	85	\$36.89	\$7.80	\$20.85	\$0.00	\$65.54
6	90	\$39.06	\$7.80	\$20.85	\$0.00	\$67.71

Notes:

** Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:**

JACKHAMMER & PAVING BREAKER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

LABORER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.35	\$7.45	\$13.55	\$0.00	\$56.35
	06/01/2016	\$36.10	\$7.45	\$13.55	\$0.00	\$57.10
	12/01/2016	\$37.10	\$7.45	\$13.55	\$0.00	\$58.10

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER - Zone 1

Effective Date - 12/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.21	\$7.45	\$13.55	\$0.00	\$42.21
2	70	\$24.75	\$7.45	\$13.55	\$0.00	\$45.75
3	80	\$28.28	\$7.45	\$13.55	\$0.00	\$49.28
4	90	\$31.82	\$7.45	\$13.55	\$0.00	\$52.82

Effective Date - 06/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.66	\$7.45	\$13.55	\$0.00	\$42.66
2	70	\$25.27	\$7.45	\$13.55	\$0.00	\$46.27
3	80	\$28.88	\$7.45	\$13.55	\$0.00	\$49.88
4	90	\$32.49	\$7.45	\$13.55	\$0.00	\$53.49

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.35	\$7.45	\$13.55	\$0.00	\$56.35
	06/01/2016	\$36.10	\$7.45	\$13.55	\$0.00	\$57.10
	12/01/2016	\$37.10	\$7.45	\$13.55	\$0.00	\$58.10

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.35	\$7.45	\$13.55	\$0.00	\$56.35
	06/01/2016	\$36.10	\$7.45	\$13.55	\$0.00	\$57.10
	12/01/2016	\$37.10	\$7.45	\$13.55	\$0.00	\$58.10

For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.50	\$7.45	\$13.55	\$0.00	\$56.50

For apprentice rates see "Apprentice- LABORER"

LABORER: MASON TENDER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.35	\$7.45	\$13.55	\$0.00	\$56.35
	06/01/2016	\$36.10	\$7.45	\$13.55	\$0.00	\$57.10
	12/01/2016	\$37.10	\$7.45	\$13.55	\$0.00	\$58.10

For apprentice rates see "Apprentice- LABORER"

LABORER: TREE REMOVER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.35	\$7.45	\$13.55	\$0.00	\$56.35
	06/01/2016	\$36.10	\$7.45	\$13.55	\$0.00	\$57.10
	12/01/2016	\$37.10	\$7.45	\$13.55	\$0.00	\$58.10

This classification applies to all tree work associated with the removal of standing trees, and trimming and removal of branches and limbs when the work is not done for a utility company for the purpose of operation, maintenance or repair of utility company equipment. For apprentice rates see "Apprentice- LABORER"

LASER BEAM OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2016	\$38.08	\$10.18	\$17.70	\$0.00	\$65.96
	08/01/2016	\$38.78	\$10.18	\$17.78	\$0.00	\$66.74
	02/01/2017	\$39.24	\$10.18	\$17.78	\$0.00	\$67.20

Apprentice - MARBLE & TILE FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.04	\$10.18	\$17.70	\$0.00	\$46.92
2	60	\$22.85	\$10.18	\$17.70	\$0.00	\$50.73
3	70	\$26.66	\$10.18	\$17.70	\$0.00	\$54.54
4	80	\$30.46	\$10.18	\$17.70	\$0.00	\$58.34
5	90	\$34.27	\$10.18	\$17.70	\$0.00	\$62.15

Effective Date - 08/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.39	\$10.18	\$17.78	\$0.00	\$47.35
2	60	\$23.27	\$10.18	\$17.78	\$0.00	\$51.23
3	70	\$27.15	\$10.18	\$17.78	\$0.00	\$55.11
4	80	\$31.02	\$10.18	\$17.78	\$0.00	\$58.98
5	90	\$34.90	\$10.18	\$17.78	\$0.00	\$62.86

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS, TILELAYERS & TERRAZZO MECH <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2016	\$49.90	\$10.18	\$19.14	\$0.00	\$79.22
	08/01/2016	\$50.80	\$10.18	\$19.22	\$0.00	\$80.20
	02/01/2017	\$51.37	\$10.18	\$19.22	\$0.00	\$80.77

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.95	\$10.18	\$19.14	\$0.00	\$54.27
2	60	\$29.94	\$10.18	\$19.14	\$0.00	\$59.26
3	70	\$34.93	\$10.18	\$19.14	\$0.00	\$64.25
4	80	\$39.92	\$10.18	\$19.14	\$0.00	\$69.24
5	90	\$44.91	\$10.18	\$19.14	\$0.00	\$74.23

Effective Date - 08/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.40	\$10.18	\$19.22	\$0.00	\$54.80
2	60	\$30.48	\$10.18	\$19.22	\$0.00	\$59.88
3	70	\$35.56	\$10.18	\$19.22	\$0.00	\$64.96
4	80	\$40.64	\$10.18	\$19.22	\$0.00	\$70.04
5	90	\$45.72	\$10.18	\$19.22	\$0.00	\$75.12

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 1) <i>MILLWRIGHTS LOCAL 1121 - Zone 1</i>	04/01/2015	\$37.64	\$9.80	\$16.21	\$0.00	\$63.65
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Apprentice - MILLWRIGHT - Local 1121 Zone 1

Effective Date - 04/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$20.70	\$9.80	\$4.48	\$0.00	\$34.98
2	65	\$24.47	\$9.80	\$13.36	\$0.00	\$47.63
3	75	\$28.23	\$9.80	\$14.18	\$0.00	\$52.21
4	85	\$31.99	\$9.80	\$14.99	\$0.00	\$56.78

Notes:

Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES,GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$22.27	\$10.00	\$14.90	\$0.00	\$47.17
	06/01/2016	\$22.66	\$10.00	\$14.90	\$0.00	\$47.56
	12/01/2016	\$23.31	\$10.00	\$14.90	\$0.00	\$48.21
	06/01/2017	\$23.82	\$10.00	\$14.90	\$0.00	\$48.72
	12/01/2017	\$24.34	\$10.00	\$14.90	\$0.00	\$49.24

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$26.08	\$10.00	\$14.90	\$0.00	\$50.98
	06/01/2016	\$26.54	\$10.00	\$14.90	\$0.00	\$51.44
	12/01/2016	\$27.29	\$10.00	\$14.90	\$0.00	\$52.19
	06/01/2017	\$27.89	\$10.00	\$14.90	\$0.00	\$52.79
	12/01/2017	\$28.50	\$10.00	\$14.90	\$0.00	\$53.40

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 1</i>	01/01/2016	\$49.51	\$7.85	\$16.10	\$0.00	\$73.46
	07/01/2016	\$50.46	\$7.85	\$16.10	\$0.00	\$74.41
	01/01/2017	\$51.41	\$7.85	\$16.10	\$0.00	\$75.36

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.76	\$7.85	\$0.00	\$0.00	\$32.61
2	55	\$27.23	\$7.85	\$3.66	\$0.00	\$38.74
3	60	\$29.71	\$7.85	\$3.99	\$0.00	\$41.55
4	65	\$32.18	\$7.85	\$4.32	\$0.00	\$44.35
5	70	\$34.66	\$7.85	\$14.11	\$0.00	\$56.62
6	75	\$37.13	\$7.85	\$14.44	\$0.00	\$59.42
7	80	\$39.61	\$7.85	\$14.77	\$0.00	\$62.23
8	90	\$44.56	\$7.85	\$15.44	\$0.00	\$67.85

Effective Date - 07/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.23	\$7.85	\$0.00	\$0.00	\$33.08
2	55	\$27.75	\$7.85	\$3.66	\$0.00	\$39.26
3	60	\$30.28	\$7.85	\$3.99	\$0.00	\$42.12
4	65	\$32.80	\$7.85	\$4.32	\$0.00	\$44.97
5	70	\$35.32	\$7.85	\$14.11	\$0.00	\$57.28
6	75	\$37.85	\$7.85	\$14.44	\$0.00	\$60.14
7	80	\$40.37	\$7.85	\$14.77	\$0.00	\$62.99
8	90	\$45.41	\$7.85	\$15.44	\$0.00	\$68.70

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2016	\$46.20	\$7.85	\$16.10	\$0.00	\$70.15
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 1	07/01/2016	\$47.15	\$7.85	\$16.10	\$0.00	\$71.10
	01/01/2017	\$48.10	\$7.85	\$16.10	\$0.00	\$72.05

Apprentice - PAINTER Local 35 Zone 1 - Spray/Sandblast - New

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.10	\$7.85	\$0.00	\$0.00	\$30.95
2	55	\$25.41	\$7.85	\$3.66	\$0.00	\$36.92
3	60	\$27.72	\$7.85	\$3.99	\$0.00	\$39.56
4	65	\$30.03	\$7.85	\$4.32	\$0.00	\$42.20
5	70	\$32.34	\$7.85	\$14.11	\$0.00	\$54.30
6	75	\$34.65	\$7.85	\$14.44	\$0.00	\$56.94
7	80	\$36.96	\$7.85	\$14.77	\$0.00	\$59.58
8	90	\$41.58	\$7.85	\$15.44	\$0.00	\$64.87

Effective Date - 07/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.58	\$7.85	\$0.00	\$0.00	\$31.43
2	55	\$25.93	\$7.85	\$3.66	\$0.00	\$37.44
3	60	\$28.29	\$7.85	\$3.99	\$0.00	\$40.13
4	65	\$30.65	\$7.85	\$4.32	\$0.00	\$42.82
5	70	\$33.01	\$7.85	\$14.11	\$0.00	\$54.97
6	75	\$35.36	\$7.85	\$14.44	\$0.00	\$57.65
7	80	\$37.72	\$7.85	\$14.77	\$0.00	\$60.34
8	90	\$42.44	\$7.85	\$15.44	\$0.00	\$65.73

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2016	\$44.26	\$7.85	\$16.10	\$0.00	\$68.21
PAINTERS LOCAL 35 - ZONE 1	07/01/2016	\$45.21	\$7.85	\$16.10	\$0.00	\$69.16
	01/01/2017	\$46.16	\$7.85	\$16.10	\$0.00	\$70.11

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 1 - Spray/Sandblast - Repaint

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.13	\$7.85	\$0.00	\$0.00	\$29.98
2	55	\$24.34	\$7.85	\$3.66	\$0.00	\$35.85
3	60	\$26.56	\$7.85	\$3.99	\$0.00	\$38.40
4	65	\$28.77	\$7.85	\$4.32	\$0.00	\$40.94
5	70	\$30.98	\$7.85	\$14.11	\$0.00	\$52.94
6	75	\$33.20	\$7.85	\$14.44	\$0.00	\$55.49
7	80	\$35.41	\$7.85	\$14.77	\$0.00	\$58.03
8	90	\$39.83	\$7.85	\$15.44	\$0.00	\$63.12

Effective Date - 07/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.61	\$7.85	\$0.00	\$0.00	\$30.46
2	55	\$24.87	\$7.85	\$3.66	\$0.00	\$36.38
3	60	\$27.13	\$7.85	\$3.99	\$0.00	\$38.97
4	65	\$29.39	\$7.85	\$4.32	\$0.00	\$41.56
5	70	\$31.65	\$7.85	\$14.11	\$0.00	\$53.61
6	75	\$33.91	\$7.85	\$14.44	\$0.00	\$56.20
7	80	\$36.17	\$7.85	\$14.77	\$0.00	\$58.79
8	90	\$40.69	\$7.85	\$15.44	\$0.00	\$63.98

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (TRAFFIC MARKINGS) LABORERS - ZONE 1	12/01/2015	\$35.35	\$7.45	\$13.55	\$0.00	\$56.35
	06/01/2016	\$36.10	\$7.45	\$13.55	\$0.00	\$57.10
	12/01/2016	\$37.10	\$7.45	\$13.55	\$0.00	\$58.10

For Apprentice rates see "Apprentice- LABORER"

PAINTER / TAPER (BRUSH, NEW) *	01/01/2016	\$44.80	\$7.85	\$16.10	\$0.00	\$68.75
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 1	07/01/2016	\$45.75	\$7.85	\$16.10	\$0.00	\$69.70
	01/01/2017	\$46.70	\$7.85	\$16.10	\$0.00	\$70.65

Apprentice - PAINTER - Local 35 Zone 1 - BRUSH NEW

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.40	\$7.85	\$0.00	\$0.00	\$30.25
2	55	\$24.64	\$7.85	\$3.66	\$0.00	\$36.15
3	60	\$26.88	\$7.85	\$3.99	\$0.00	\$38.72
4	65	\$29.12	\$7.85	\$4.32	\$0.00	\$41.29
5	70	\$31.36	\$7.85	\$14.11	\$0.00	\$53.32
6	75	\$33.60	\$7.85	\$14.44	\$0.00	\$55.89
7	80	\$35.84	\$7.85	\$14.77	\$0.00	\$58.46
8	90	\$40.32	\$7.85	\$15.44	\$0.00	\$63.61

Effective Date - 07/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.88	\$7.85	\$0.00	\$0.00	\$30.73
2	55	\$25.16	\$7.85	\$3.66	\$0.00	\$36.67
3	60	\$27.45	\$7.85	\$3.99	\$0.00	\$39.29
4	65	\$29.74	\$7.85	\$4.32	\$0.00	\$41.91
5	70	\$32.03	\$7.85	\$14.11	\$0.00	\$53.99
6	75	\$34.31	\$7.85	\$14.44	\$0.00	\$56.60
7	80	\$36.60	\$7.85	\$14.77	\$0.00	\$59.22
8	90	\$41.18	\$7.85	\$15.44	\$0.00	\$64.47

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)	01/01/2016	\$42.86	\$7.85	\$16.10	\$0.00	\$66.81
PAINTERS LOCAL 35 - ZONE 1	07/01/2016	\$43.81	\$7.85	\$16.10	\$0.00	\$67.76
	01/01/2017	\$44.76	\$7.85	\$16.10	\$0.00	\$68.71

Apprentice - PAINTER Local 35 Zone 1 - BRUSH REPAINT

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.43	\$7.85	\$0.00	\$0.00	\$29.28
2	55	\$23.57	\$7.85	\$3.66	\$0.00	\$35.08
3	60	\$25.72	\$7.85	\$3.99	\$0.00	\$37.56
4	65	\$27.86	\$7.85	\$4.32	\$0.00	\$40.03
5	70	\$30.00	\$7.85	\$14.11	\$0.00	\$51.96
6	75	\$32.15	\$7.85	\$14.44	\$0.00	\$54.44
7	80	\$34.29	\$7.85	\$14.77	\$0.00	\$56.91
8	90	\$38.57	\$7.85	\$15.44	\$0.00	\$61.86

Effective Date - 07/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.91	\$7.85	\$0.00	\$0.00	\$29.76
2	55	\$24.10	\$7.85	\$3.66	\$0.00	\$35.61
3	60	\$26.29	\$7.85	\$3.99	\$0.00	\$38.13
4	65	\$28.48	\$7.85	\$4.32	\$0.00	\$40.65
5	70	\$30.67	\$7.85	\$14.11	\$0.00	\$52.63
6	75	\$32.86	\$7.85	\$14.44	\$0.00	\$55.15
7	80	\$35.05	\$7.85	\$14.77	\$0.00	\$57.67
8	90	\$39.43	\$7.85	\$15.44	\$0.00	\$62.72

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PANEL & PICKUP TRUCKS DRIVER <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$32.58	\$10.41	\$10.08	\$0.00	\$53.07
	06/01/2016	\$33.08	\$10.41	\$10.08	\$0.00	\$53.57
	08/01/2016	\$33.08	\$10.91	\$10.08	\$0.00	\$54.07
	12/01/2016	\$33.08	\$10.91	\$10.89	\$0.00	\$54.88
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$42.04	\$9.80	\$19.23	\$0.00	\$71.07
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2015	\$42.04	\$9.80	\$19.23	\$0.00	\$71.07

Apprentice - PILE DRIVER - Local 56 Zone 1

Effective Date - 08/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.02	\$9.80	\$19.23	\$0.00	\$50.05
2	60	\$25.22	\$9.80	\$19.23	\$0.00	\$54.25
3	70	\$29.43	\$9.80	\$19.23	\$0.00	\$58.46
4	75	\$31.53	\$9.80	\$19.23	\$0.00	\$60.56
5	80	\$33.63	\$9.80	\$19.23	\$0.00	\$62.66
6	80	\$33.63	\$9.80	\$19.23	\$0.00	\$62.66
7	90	\$37.84	\$9.80	\$19.23	\$0.00	\$66.87
8	90	\$37.84	\$9.80	\$19.23	\$0.00	\$66.87

Notes:

Apprentice to Journeyworker Ratio:1:3

PIPEFITTER & STEAMFITTER	09/01/2015	\$49.69	\$9.70	\$16.89	\$0.00	\$76.28
PIPEFITTERS LOCAL 537	03/01/2016	\$50.69	\$9.70	\$16.89	\$0.00	\$77.28
	09/01/2016	\$51.69	\$9.70	\$16.89	\$0.00	\$78.28
	03/01/2017	\$52.69	\$9.70	\$16.89	\$0.00	\$79.28

Apprentice - PIPEFITTER - Local 537

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.88	\$9.70	\$7.50	\$0.00	\$37.08
2	45	\$22.36	\$9.70	\$16.89	\$0.00	\$48.95
3	60	\$29.81	\$9.70	\$16.89	\$0.00	\$56.40
4	70	\$34.78	\$9.70	\$16.89	\$0.00	\$61.37
5	80	\$39.75	\$9.70	\$16.89	\$0.00	\$66.34

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$20.28	\$9.70	\$7.50	\$0.00	\$37.48
2	45	\$22.81	\$9.70	\$16.89	\$0.00	\$49.40
3	60	\$30.41	\$9.70	\$16.89	\$0.00	\$57.00
4	70	\$35.48	\$9.70	\$16.89	\$0.00	\$62.07
5	80	\$40.55	\$9.70	\$16.89	\$0.00	\$67.14

Notes:

** 1:3; 3:15; 1:10 thereafter / Steps are 1 yr.
 Refrig/AC Mechanic **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8:17;9:20;10:23(Max)

Apprentice to Journeyworker Ratio:**

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIPELAYER <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
PLUMBERS & GASFITTERS <i>PLUMBERS & GASFITTERS LOCAL 12</i>	09/01/2015	\$50.46	\$10.82	\$15.14	\$0.00	\$76.42
	03/01/2016	\$51.61	\$10.82	\$15.14	\$0.00	\$77.57
	09/01/2016	\$52.66	\$10.82	\$15.14	\$0.00	\$78.62
	03/01/2017	\$53.66	\$10.82	\$15.14	\$0.00	\$79.62

Apprentice - PLUMBER/GASFITTER - Local 12

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.66	\$10.82	\$5.63	\$0.00	\$34.11
2	40	\$20.18	\$10.82	\$6.37	\$0.00	\$37.37
3	55	\$27.75	\$10.82	\$8.56	\$0.00	\$47.13
4	65	\$32.80	\$10.82	\$10.03	\$0.00	\$53.65
5	75	\$37.85	\$10.82	\$11.48	\$0.00	\$60.15

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$18.06	\$10.82	\$5.61	\$0.00	\$34.49
2	40	\$20.64	\$10.82	\$6.36	\$0.00	\$37.82
3	55	\$28.39	\$10.82	\$8.56	\$0.00	\$47.77
4	65	\$33.55	\$10.82	\$10.02	\$0.00	\$54.39
5	75	\$38.71	\$10.82	\$11.48	\$0.00	\$61.01

Notes:

** 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr
Step4 with lic\$56.90 Step5 with lic\$63.40

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.) <i>PIPEFITTERS LOCAL 537</i>	09/01/2015	\$49.69	\$9.70	\$16.89	\$0.00	\$76.28
	03/01/2016	\$50.69	\$9.70	\$16.89	\$0.00	\$77.28
	09/01/2016	\$51.69	\$9.70	\$16.89	\$0.00	\$78.28
	03/01/2017	\$52.69	\$9.70	\$16.89	\$0.00	\$79.28

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

PNEUMATIC DRILL/TOOL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

POWDERMAN & BLASTER <i>LABORERS - ZONE 1</i>	12/01/2015	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	06/01/2016	\$37.10	\$7.45	\$13.55	\$0.00	\$58.10
	12/01/2016	\$38.10	\$7.45	\$13.55	\$0.00	\$59.10

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$30.13	\$10.00	\$14.90	\$0.00	\$55.03
	06/01/2016	\$30.65	\$10.00	\$14.90	\$0.00	\$55.55
	12/01/2016	\$31.52	\$10.00	\$14.90	\$0.00	\$56.42
	06/01/2017	\$32.21	\$10.00	\$14.90	\$0.00	\$57.11
	12/01/2017	\$32.90	\$10.00	\$14.90	\$0.00	\$57.80
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY MIX CONCRETE DRIVERS after 4/30/10 (Drivers Hired After 4/30/2010) <i>TEAMSTERS LOCAL 25c</i>	07/01/2015	\$27.88	\$7.98	\$8.92	\$0.00	\$44.78
	05/01/2016	\$28.03	\$7.98	\$9.31	\$0.00	\$45.32
	07/01/2016	\$28.03	\$8.23	\$9.31	\$0.00	\$45.57
	05/01/2017	\$28.18	\$8.23	\$9.72	\$0.00	\$46.13
	07/01/2017	\$28.18	\$8.48	\$9.72	\$0.00	\$46.38
READY-MIX CONCRETE DRIVER <i>TEAMSTERS LOCAL 25c</i>	07/01/2015	\$29.18	\$7.98	\$8.92	\$0.00	\$46.08
	05/01/2016	\$29.33	\$7.98	\$9.31	\$0.00	\$46.62
	07/01/2016	\$29.33	\$8.23	\$9.31	\$0.00	\$46.87
	05/01/2017	\$29.48	\$8.23	\$9.72	\$0.00	\$47.43
	07/01/2017	\$29.48	\$8.48	\$9.72	\$0.00	\$47.68
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RESIDENTIAL WOOD FRAME (All Other Work) <i>CARPENTERS -ZONE 2 (Residential Wood)</i>	04/01/2011	\$24.24	\$8.67	\$15.51	\$0.00	\$48.42
RESIDENTIAL WOOD FRAME CARPENTER ** ** The Residential Wood Frame Carpenter classification applies only to the construction of new, wood frame residences that do not exceed four stories including the basement. <i>CARPENTERS -ZONE 2 (Residential Wood)</i> As of 9/1/09 Carpentry work on wood-frame residential WEATHERIZATION projects shall be paid the RESIDENTIAL WOOD FRAME CARPENTER rate.	05/01/2011	\$24.24	\$6.34	\$6.23	\$0.00	\$36.81

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CARPENTER (Residential Wood Frame) - Zone 2

Effective Date - 05/01/2011

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$14.54	\$6.34	\$0.00	\$0.00	\$20.88
2	60	\$14.54	\$6.34	\$6.23	\$0.00	\$27.11
3	65	\$15.76	\$6.34	\$6.23	\$0.00	\$28.33
4	70	\$16.97	\$6.34	\$6.23	\$0.00	\$29.54
5	75	\$18.18	\$6.34	\$6.23	\$0.00	\$30.75
6	80	\$19.39	\$6.34	\$6.23	\$0.00	\$31.96
7	85	\$20.60	\$6.34	\$6.23	\$0.00	\$33.17
8	90	\$21.82	\$6.34	\$6.23	\$0.00	\$34.39

Notes:

Apprentice to Journeyworker Ratio:1:5

RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

ROOFER (Inc.Roofing Waterproofing &Roofing Damproofing) <i>ROOFERS LOCAL 33</i>	02/01/2016	\$40.11	\$11.00	\$12.90	\$0.00	\$64.01
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Apprentice - ROOFER - Local 33

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.06	\$11.00	\$3.39	\$0.00	\$34.45
2	60	\$24.07	\$11.00	\$12.90	\$0.00	\$47.97
3	65	\$26.07	\$11.00	\$12.90	\$0.00	\$49.97
4	75	\$30.08	\$11.00	\$12.90	\$0.00	\$53.98
5	85	\$34.09	\$11.00	\$12.90	\$0.00	\$57.99

**Notes: ** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1
Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.**

Apprentice to Journeyworker Ratio:**

ROOFER SLATE / TILE / PRECAST CONCRETE <i>ROOFERS LOCAL 33</i>	02/01/2016	\$40.36	\$11.00	\$12.90	\$0.00	\$64.26
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For apprentice rates see "Apprentice- ROOFER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 17 - A	02/01/2016	\$43.31	\$10.70	\$21.95	\$2.28	\$78.24
	08/01/2016	\$44.46	\$10.70	\$21.95	\$2.28	\$79.39
	02/01/2017	\$45.56	\$10.70	\$21.95	\$2.28	\$80.49
	08/01/2017	\$46.66	\$10.70	\$21.95	\$2.28	\$81.59
	02/01/2018	\$47.81	\$10.70	\$21.95	\$2.28	\$82.74

Apprentice - SHEET METAL WORKER - Local 17-A

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.32	\$10.70	\$4.90	\$0.00	\$32.92
2	40	\$17.32	\$10.70	\$4.90	\$0.00	\$32.92
3	45	\$19.49	\$10.70	\$9.79	\$1.20	\$41.18
4	45	\$19.49	\$10.70	\$9.79	\$1.20	\$41.18
5	50	\$21.66	\$10.70	\$10.65	\$1.29	\$44.30
6	50	\$21.66	\$10.70	\$10.90	\$1.30	\$44.56
7	60	\$25.99	\$10.70	\$12.37	\$1.47	\$50.53
8	65	\$28.15	\$10.70	\$13.24	\$1.56	\$53.65
9	75	\$32.48	\$10.70	\$14.97	\$1.74	\$59.89
10	85	\$36.81	\$10.70	\$16.18	\$1.91	\$65.60

Effective Date - 08/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.78	\$10.70	\$4.90	\$0.00	\$33.38
2	40	\$17.78	\$10.70	\$4.90	\$0.00	\$33.38
3	45	\$20.01	\$10.70	\$9.79	\$1.22	\$41.72
4	45	\$20.01	\$10.70	\$9.79	\$1.22	\$41.72
5	50	\$22.23	\$10.70	\$10.65	\$1.31	\$44.89
6	50	\$22.23	\$10.70	\$10.90	\$1.31	\$45.14
7	60	\$26.68	\$10.70	\$12.37	\$1.49	\$51.24
8	65	\$28.90	\$10.70	\$13.24	\$1.59	\$54.43
9	75	\$33.35	\$10.70	\$14.97	\$1.77	\$60.79
10	85	\$37.79	\$10.70	\$16.18	\$1.94	\$66.61

Notes:

Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SIGN ERECTOR PAINTERS LOCAL 35 - ZONE 1	06/01/2013	\$25.81	\$7.07	\$7.05	\$0.00	\$39.93
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SIGN ERECTOR - Local 35 Zone 1

Effective Date - 06/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$12.91	\$7.07	\$0.00	\$0.00	\$19.98
2	55	\$14.20	\$7.07	\$2.45	\$0.00	\$23.72
3	60	\$15.49	\$7.07	\$2.45	\$0.00	\$25.01
4	65	\$16.78	\$7.07	\$2.45	\$0.00	\$26.30
5	70	\$18.07	\$7.07	\$7.05	\$0.00	\$32.19
6	75	\$19.36	\$7.07	\$7.05	\$0.00	\$33.48
7	80	\$20.65	\$7.07	\$7.05	\$0.00	\$34.77
8	85	\$21.94	\$7.07	\$7.05	\$0.00	\$36.06
9	90	\$23.23	\$7.07	\$7.05	\$0.00	\$37.35

Notes:
Steps are 4 mos.

Apprentice to Journeyworker Ratio:1:1

SPECIALIZED EARTH MOVING EQUIP < 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$33.04	\$10.41	\$10.08	\$0.00	\$53.53
	06/01/2016	\$33.54	\$10.41	\$10.08	\$0.00	\$54.03
	08/01/2016	\$33.54	\$10.91	\$10.08	\$0.00	\$54.53
	12/01/2016	\$33.54	\$10.91	\$10.89	\$0.00	\$55.34
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$33.33	\$10.41	\$10.08	\$0.00	\$53.82
	06/01/2016	\$33.83	\$10.41	\$10.08	\$0.00	\$54.32
	08/01/2016	\$33.83	\$10.91	\$10.08	\$0.00	\$54.82
	12/01/2016	\$33.83	\$10.91	\$10.89	\$0.00	\$55.63
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1</i>	01/01/2016	\$54.43	\$8.67	\$15.80	\$0.00	\$78.90
	03/01/2016	\$55.43	\$8.67	\$15.80	\$0.00	\$79.90
	10/01/2016	\$56.58	\$8.67	\$15.80	\$0.00	\$81.05
	03/01/2017	\$57.58	\$8.67	\$15.80	\$0.00	\$82.05

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SPRINKLER FITTER - Local 550 (Section A) Zone 1

Effective Date - 01/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$19.05	\$8.67	\$8.55	\$0.00	\$36.27
2	40	\$21.77	\$8.67	\$8.55	\$0.00	\$38.99
3	45	\$24.49	\$8.67	\$8.55	\$0.00	\$41.71
4	50	\$27.22	\$8.67	\$8.55	\$0.00	\$44.44
5	55	\$29.94	\$8.67	\$8.55	\$0.00	\$47.16
6	60	\$32.66	\$8.67	\$8.55	\$0.00	\$49.88
7	65	\$35.38	\$8.67	\$8.55	\$0.00	\$52.60
8	70	\$38.10	\$8.67	\$8.55	\$0.00	\$55.32
9	75	\$40.82	\$8.67	\$8.55	\$0.00	\$58.04
10	80	\$43.54	\$8.67	\$8.55	\$0.00	\$60.76

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$19.40	\$8.67	\$8.55	\$0.00	\$36.62
2	40	\$22.17	\$8.67	\$8.55	\$0.00	\$39.39
3	45	\$24.94	\$8.67	\$8.55	\$0.00	\$42.16
4	50	\$27.72	\$8.67	\$8.55	\$0.00	\$44.94
5	55	\$30.49	\$8.67	\$8.55	\$0.00	\$47.71
6	60	\$33.26	\$8.67	\$8.55	\$0.00	\$50.48
7	65	\$36.03	\$8.67	\$8.55	\$0.00	\$53.25
8	70	\$38.80	\$8.67	\$8.55	\$0.00	\$56.02
9	75	\$41.57	\$8.67	\$8.55	\$0.00	\$58.79
10	80	\$44.34	\$8.67	\$8.55	\$0.00	\$61.56

Notes: Apprentice entered prior 9/30/10:
40/45/50/55/60/65/70/75/80/85
Steps are 850 hours

Apprentice to Journeyworker Ratio:1:3

STEAM BOILER OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 103</i>	09/01/2015	\$34.25	\$13.00	\$14.06	\$0.00	\$61.31
	03/01/2016	\$34.63	\$13.00	\$14.55	\$0.00	\$62.18

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

Effective Date - 09/01/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.70	\$13.00	\$0.41	\$0.00	\$27.11
2	40	\$13.70	\$13.00	\$0.41	\$0.00	\$27.11
3	45	\$15.41	\$13.00	\$11.03	\$0.00	\$39.44
4	45	\$15.41	\$13.00	\$11.03	\$0.00	\$39.44
5	50	\$17.13	\$13.00	\$11.30	\$0.00	\$41.43
6	55	\$18.84	\$13.00	\$11.58	\$0.00	\$43.42
7	60	\$20.55	\$13.00	\$11.86	\$0.00	\$45.41
8	65	\$22.26	\$13.00	\$12.13	\$0.00	\$47.39
9	70	\$23.98	\$13.00	\$12.41	\$0.00	\$49.39
10	75	\$25.69	\$13.00	\$12.68	\$0.00	\$51.37

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.85	\$13.00	\$0.42	\$0.00	\$27.27
2	40	\$13.85	\$13.00	\$0.42	\$0.00	\$27.27
3	45	\$15.58	\$13.00	\$11.52	\$0.00	\$40.10
4	45	\$15.58	\$13.00	\$11.52	\$0.00	\$40.10
5	50	\$17.32	\$13.00	\$11.79	\$0.00	\$42.11
6	55	\$19.05	\$13.00	\$12.06	\$0.00	\$44.11
7	60	\$20.78	\$13.00	\$12.34	\$0.00	\$46.12
8	65	\$22.51	\$13.00	\$12.62	\$0.00	\$48.13
9	70	\$24.24	\$13.00	\$12.90	\$0.00	\$50.14
10	75	\$25.97	\$13.00	\$13.17	\$0.00	\$52.14

Notes:

Apprentice to Journeyworker Ratio:1:1

TERRAZZO FINISHERS	02/01/2016	\$48.80	\$10.18	\$19.14	\$0.00	\$78.12
BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2016	\$49.70	\$10.18	\$19.22	\$0.00	\$79.10
	02/01/2017	\$50.27	\$10.18	\$19.22	\$0.00	\$79.67

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.40	\$10.18	\$19.14	\$0.00	\$53.72
2	60	\$29.28	\$10.18	\$19.14	\$0.00	\$58.60
3	70	\$34.16	\$10.18	\$19.14	\$0.00	\$63.48
4	80	\$39.04	\$10.18	\$19.14	\$0.00	\$68.36
5	90	\$43.92	\$10.18	\$19.14	\$0.00	\$73.24

Effective Date - 08/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.85	\$10.18	\$19.22	\$0.00	\$54.25
2	60	\$29.82	\$10.18	\$19.22	\$0.00	\$59.22
3	70	\$34.79	\$10.18	\$19.22	\$0.00	\$64.19
4	80	\$39.76	\$10.18	\$19.22	\$0.00	\$69.16
5	90	\$44.73	\$10.18	\$19.22	\$0.00	\$74.13

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2015	\$36.70	\$7.45	\$13.75	\$0.00	\$57.90
	06/01/2016	\$37.45	\$7.45	\$13.75	\$0.00	\$58.65
	12/01/2016	\$38.45	\$7.45	\$13.75	\$0.00	\$59.65
For apprentice rates see "Apprentice- LABORER"						
TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2015	\$35.42	\$7.45	\$13.75	\$0.00	\$56.62
	06/01/2016	\$36.17	\$7.45	\$13.75	\$0.00	\$57.37
	12/01/2016	\$37.17	\$7.45	\$13.75	\$0.00	\$58.37
For apprentice rates see "Apprentice- LABORER"						
TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2015	\$35.30	\$7.45	\$13.75	\$0.00	\$56.50
	06/01/2016	\$36.05	\$7.45	\$13.75	\$0.00	\$57.25
	12/01/2016	\$37.05	\$7.45	\$13.75	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.31	\$10.00	\$14.90	\$0.00	\$68.21
	06/01/2016	\$44.06	\$10.00	\$14.90	\$0.00	\$68.96
	12/01/2016	\$45.29	\$10.00	\$14.90	\$0.00	\$70.19
	06/01/2017	\$46.28	\$10.00	\$14.90	\$0.00	\$71.18
	12/01/2017	\$47.27	\$10.00	\$14.90	\$0.00	\$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$33.62	\$10.41	\$10.08	\$0.00	\$54.11
	06/01/2016	\$34.12	\$10.41	\$10.08	\$0.00	\$54.61
	08/01/2016	\$34.12	\$10.91	\$10.08	\$0.00	\$55.11
	12/01/2016	\$34.12	\$10.91	\$10.89	\$0.00	\$55.92

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2015	\$47.58	\$7.45	\$14.15	\$0.00	\$69.18
	06/01/2016	\$48.33	\$7.45	\$14.15	\$0.00	\$69.93
	12/01/2016	\$49.33	\$7.45	\$14.15	\$0.00	\$70.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2015	\$49.58	\$7.45	\$14.15	\$0.00	\$71.18
	06/01/2016	\$50.33	\$7.45	\$14.15	\$0.00	\$71.93
	12/01/2016	\$51.33	\$7.45	\$14.15	\$0.00	\$72.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2015	\$39.65	\$7.45	\$14.15	\$0.00	\$61.25
	06/01/2016	\$40.40	\$7.45	\$14.15	\$0.00	\$62.00
	12/01/2016	\$41.40	\$7.45	\$14.15	\$0.00	\$63.00
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2015	\$41.65	\$7.45	\$14.15	\$0.00	\$63.25
	06/01/2016	\$42.40	\$7.45	\$14.15	\$0.00	\$64.00
	12/01/2016	\$43.40	\$7.45	\$14.15	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2015	\$33.04	\$10.41	\$10.08	\$0.00	\$53.53
	06/01/2016	\$33.54	\$10.41	\$10.08	\$0.00	\$54.03
	08/01/2016	\$33.54	\$10.91	\$10.08	\$0.00	\$54.53
	12/01/2016	\$33.54	\$10.91	\$10.89	\$0.00	\$55.34
WAGON DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2015	\$35.60	\$7.45	\$13.55	\$0.00	\$56.60
	06/01/2016	\$36.35	\$7.45	\$13.55	\$0.00	\$57.35
	12/01/2016	\$37.35	\$7.45	\$13.55	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.73	\$10.00	\$14.90	\$0.00	\$68.63
	06/01/2016	\$44.48	\$10.00	\$14.90	\$0.00	\$69.38
	12/01/2016	\$45.73	\$10.00	\$14.90	\$0.00	\$70.63
	06/01/2017	\$46.73	\$10.00	\$14.90	\$0.00	\$71.63
	12/01/2017	\$47.73	\$10.00	\$14.90	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS & GASFITTERS LOCAL 12</i>	09/01/2015	\$50.46	\$10.82	\$15.14	\$0.00	\$76.42
	03/01/2016	\$51.61	\$10.82	\$15.14	\$0.00	\$77.57
	09/01/2016	\$52.66	\$10.82	\$15.14	\$0.00	\$78.62
	03/01/2017	\$53.66	\$10.82	\$15.14	\$0.00	\$79.62
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
Outside Electrical - East						
CABLE TECHNICIAN (Power Zone) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$26.11	\$7.25	\$1.78	\$0.00	\$35.14
	08/28/2016	\$26.61	\$7.50	\$1.80	\$0.00	\$35.91
	09/03/2017	\$27.14	\$7.75	\$1.81	\$0.00	\$36.70
For apprentice rates see "Apprentice- LINEMAN"						
CABLEMAN (Underground Ducts & Cables) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$36.98	\$7.25	\$8.12	\$0.00	\$52.35
	08/28/2016	\$37.70	\$7.50	\$8.87	\$0.00	\$54.07
	09/03/2017	\$38.45	\$7.75	\$9.53	\$0.00	\$55.73
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN CDL <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$30.46	\$7.25	\$8.34	\$0.00	\$46.05
	08/28/2016	\$31.05	\$7.50	\$8.89	\$0.00	\$47.44
	09/03/2017	\$31.66	\$7.75	\$9.44	\$0.00	\$48.85
For apprentice rates see "Apprentice- LINEMAN"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$23.93	\$7.25	\$1.72	\$0.00	\$32.90
	08/28/2016	\$24.39	\$7.50	\$1.73	\$0.00	\$33.62
	09/03/2017	\$24.88	\$7.75	\$1.75	\$0.00	\$34.38
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class A CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$36.98	\$7.25	\$12.29	\$0.00	\$56.52
	08/28/2016	\$37.70	\$7.50	\$12.95	\$0.00	\$58.15
	09/03/2017	\$38.45	\$7.75	\$13.61	\$0.00	\$59.81
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class B CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$32.63	\$7.25	\$9.05	\$0.00	\$48.93
	08/28/2016	\$33.26	\$7.50	\$9.63	\$0.00	\$50.39
	09/03/2017	\$33.92	\$7.75	\$10.21	\$0.00	\$51.88
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$23.93	\$7.25	\$1.72	\$0.00	\$32.90
	08/28/2016	\$24.39	\$7.50	\$1.73	\$0.00	\$33.62
	09/03/2017	\$24.88	\$7.75	\$1.75	\$0.00	\$34.38
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN -Inexperienced (<2000 Hrs.) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$19.58	\$7.25	\$1.59	\$0.00	\$28.42
	08/28/2016	\$19.96	\$7.50	\$1.60	\$0.00	\$29.06
	09/03/2017	\$20.35	\$7.75	\$1.61	\$0.00	\$29.71
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2015	\$43.51	\$7.25	\$15.06	\$0.00	\$65.82
	08/28/2016	\$44.35	\$7.50	\$15.83	\$0.00	\$67.68
	09/03/2017	\$45.23	\$7.75	\$16.61	\$0.00	\$69.59

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LINEMAN (Outside Electrical) - East Local 104

Effective Date - 08/30/2015

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$26.11	\$7.25	\$3.28	\$0.00	\$36.64
2	65	\$28.28	\$7.25	\$3.35	\$0.00	\$38.88
3	70	\$30.46	\$7.25	\$3.41	\$0.00	\$41.12
4	75	\$32.63	\$7.25	\$4.98	\$0.00	\$44.86
5	80	\$34.81	\$7.25	\$5.04	\$0.00	\$47.10
6	85	\$36.98	\$7.25	\$5.11	\$0.00	\$49.34
7	90	\$39.16	\$7.25	\$7.17	\$0.00	\$53.58

Effective Date - 08/28/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$26.61	\$7.50	\$3.30	\$0.00	\$37.41
2	65	\$28.83	\$7.50	\$3.36	\$0.00	\$39.69
3	70	\$31.05	\$7.50	\$3.43	\$0.00	\$41.98
4	75	\$33.26	\$7.50	\$5.00	\$0.00	\$45.76
5	80	\$35.48	\$7.50	\$5.06	\$0.00	\$48.04
6	85	\$37.70	\$7.50	\$5.13	\$0.00	\$50.33
7	90	\$39.92	\$7.50	\$7.20	\$0.00	\$54.62

Notes:

Apprentice to Journeyworker Ratio:1:2

TELEDATA CABLE SPLICER
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 01/01/2016 \$28.98 \$4.25 \$3.12 \$0.00 \$36.35

TELEDATA LINEMAN/EQUIPMENT OPERATOR
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 01/01/2016 \$27.31 \$4.25 \$3.07 \$0.00 \$34.63

TELEDATA WIREMAN/INSTALLER/TECHNICIAN
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 01/01/2016 \$27.31 \$4.25 \$3.07 \$0.00 \$34.63

TREE TRIMMER
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 01/31/2016 \$18.51 \$3.55 \$0.00 \$0.00 \$22.06

This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is not on the ground. This classification does not apply to wholesale tree removal.

TREE TRIMMER GROUNDMAN
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 01/31/2016 \$16.32 \$3.55 \$0.00 \$0.00 \$19.87

This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is on the ground. This classification does not apply to wholesale tree removal.

Additional Apprentices Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentices ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours.)

Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

** Multiple ratios are listed in the comment field.

*** APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.

**** APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.

City of Chelsea Chelsea High School

299 Everett Avenue
Chelsea, MA 02150

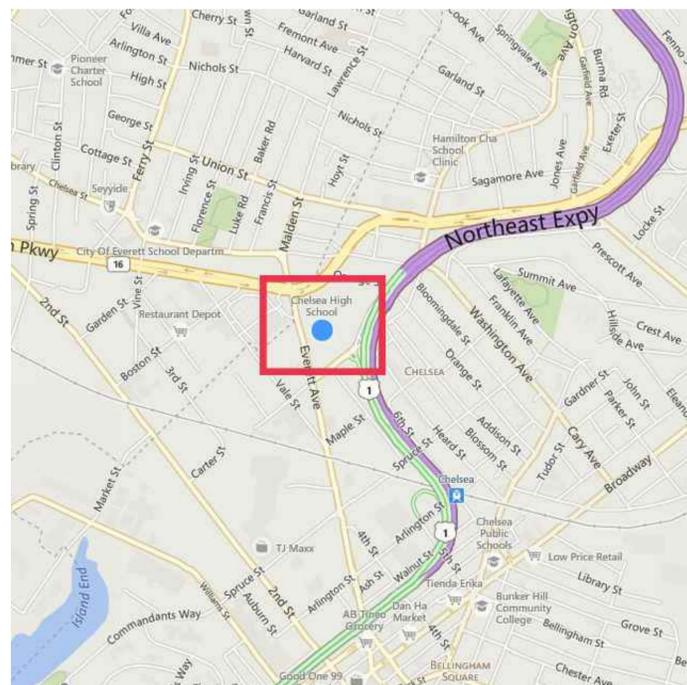


For Interior Renovation Projects
(NEW 2ND FLOOR CLASSROOM AND 2
ADMINISTRATIVE OFFICES)
at Chelsea High School

DATE: OCTOBER 31, 2015



Locus Map:



Project Team:

JACOBSTM
CONSULTANTS, INC.

343 Congress Street
Suite 2100
Boston, MA 02210

V: 617.242.9222
F: 617.242.9824

A part of the Jacobs Engineering Group, Inc.

Drawing List:

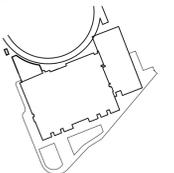
SHEET NO.	CONTENTS OF DRAWINGS
A-0	GENERAL NOTES, REFERENCE PLANS, PHOTOGRAPHS AND ABBREVIATIONS
AD-1	FIRST AND SECOND FLOOR DEMOLITION PLANS
A-1	FIRST AND SECOND FLOOR PLANS
A-2	DETAILS
A-3	SPECIFICATIONS
E-001	ELECTRICAL SYMBOLS, ABBREVIATIONS AND SCHEDULE
E-002	ELECTRICAL SPECIFICATIONS
ED-101	ELECTRICAL DEMOLITION LIGHTING PLANS
ED-201	ELECTRICAL DEMOLITION PLAN - PARTIAL LEVEL 2
E-101	ELECTRICAL LIGHTING PLANS
E-201	ELECTRICAL FLOOR PLANS - PARTIAL LEVEL 1 & 2
FS	FIRE ALARM PLANS - PARTIAL LEVEL 1 & 2
M-0	MECHANICAL NOTES SYMBOLS AND ABBREVIATIONS
M-1	FIRST AND SECOND FLOOR MECHANICAL PLANS

CONTRACTOR SHALL NOTE THAT APPENDED TO THIS SET OF DRAWINGS AND SPECIFICATIONS ARE ORIGINAL CONSTRUCTION DRAWINGS OF THE HIGH SCHOOL.

Code Summary:

- PROJECT DESCRIPTION:
DIVIDE FROM ONE TECHNOLOGY ROOM INTO TWO NEW SEPARATE CLASSROOMS ON SECOND FLOOR, AND CREATE TWO NEW ENCLOSED PRIVATE ADMINISTRATIVE OFFICES IN THE GREEN SUITE
- APPLICABLE CODES:
2009 INTERNATIONAL CODES (I-CODES) MASSACHUSETTS REGULATIONS
IBC - INTERNATIONAL BUILDING CODE 780 CMR - MA AMENDMENTS TO THE IBC
IEBC - INTERNATIONAL EXISTING BUILDING CODE 527 CMR - MA FIRE PREVENTION & ELEC.REGULATIONS
IMC - INTERNATIONAL MECHANICAL CODE 248 CMR - MA PLUMBING REGULATIONS
IECC - INTERNATIONAL ENERGY CONSERVATION CODE
- AREA OF WORK PROPOSED: 1,600 SF
- SCOPE OF WORK SHALL BE BASED ON:
IEBC PRESCRIPTIVE COMPLIANCE METHOD

SECTION 403 - ALTERATIONS
403.1 GENERAL. EXCEPT AS PROVIDED BY SECTION 401.2 OR THIS SECTION, ALTERATIONS TO ANY BUILDING OR STRUCTURE SHALL COMPLY WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE FOR NEW CONSTRUCTION. ALTERATIONS SHALL BE SUCH THAT THE EXISTING BUILDING OR STRUCTURE IS NO LESS CONFORMING TO THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE THAN THE EXISTING BUILDING OR STRUCTURE WAS PRIOR TO THE ALTERATION.



SPECIAL NOTE:

THE INFORMATION CONTAINED HEREIN REGARDING THE EXISTING CONSTRUCTION DOES NOT NECESSARILY REFLECT THE AS-BUILT CONDITION NOR ANY POSSIBLE MODIFICATIONS SUBSEQUENT TO THE ORIGINAL CONSTRUCTION. THE CONTRACTOR SHALL INVESTIGATE ALL CONDITIONS PRIOR TO DEMOLITION OR REMOVAL OF ANY PROJECT COMPONENT. WHERE MATERIAL DISCREPANCIES EXIST BETWEEN THE INFORMATION CONTAINED IN THESE DRAWINGS AND THE ACTUAL CONDITION ENCOUNTERED IN THE FIELD, THE ARCHITECT/ENGINEER SHALL BE NOTIFIED AND PROVIDED WITH DETAILED DESCRIPTIONS OF THE DIFFERING CONDITION PRIOR TO THE PERFORMANCE OF ANY WORK RELATED TO OR DISTURBANCE OF THE CONDITION.

DEMOLITION GENERAL NOTES:

1. PRIOR TO COMMENCEMENT OF WORK OR FABRICATION OF COMPONENTS CONTRACTOR SHALL INVESTIGATE AND VERIFY IN THE FIELD ALL CONDITIONS, DIMENSIONS AND ELEVATIONS OF THE EXISTING CONSTRUCTION. ALL DISCREPANCIES BETWEEN FIELD VERIFIED CONDITIONS, DIMENSIONS AND ELEVATIONS AND THOSE INDICATED ON THE DRAWINGS SHALL BE IMMEDIATELY MADE KNOWN TO THE ARCHITECT IN WRITING. THE USE OF (V.I.F.) OR (+/-) OR OTHER SIMILAR NOTES ON THE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR VERIFYING ALL CONDITIONS AS DESCRIBED ABOVE.

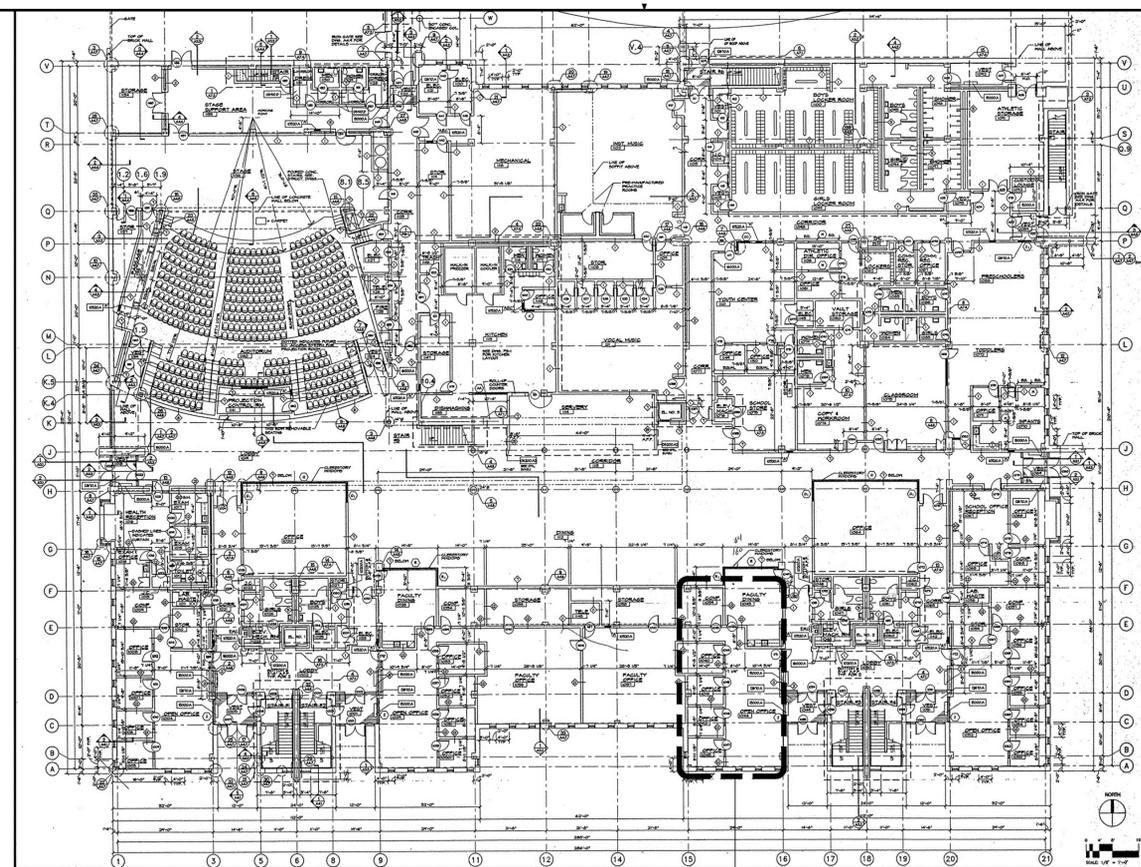
2. CONTRACTOR SHALL PROVIDE ALL MEANS OF PROTECTION OF EXISTING CONSTRUCTION, WORK IN PLACE, PROTECTION OF THE PUBLIC, ETC. DURING CONSTRUCTION.

CODES & STANDARDS:

1. THE FOLLOWING CODES AND STANDARDS INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN APPLY TO THE DESIGN AND CONSTRUCTION OF THIS PROJECT

A. IBC INTERNATIONAL BUILDING CODE - 2009 WITH MASSACHUSETTS AMENDMENTS

B. IBC INTERNATIONAL EXISTING BUILDING CODE - 2009 WITH MASSACHUSETTS AMENDMENTS

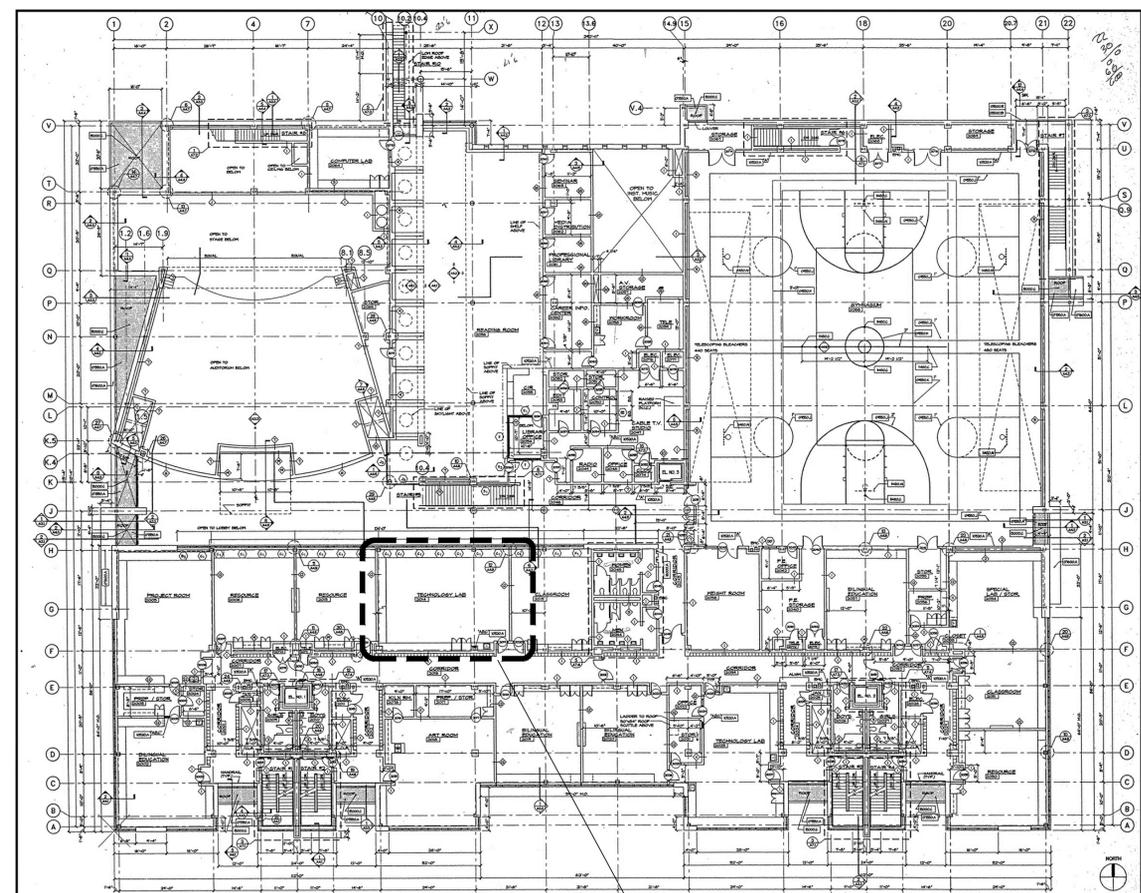


1 EXISTING FIRST FLOOR PLAN
A-0 SCALE: NOT TO SCALE

OFFICE PROJECT LOCATION
REFER TO 1/A-1 (ROOM 1044)

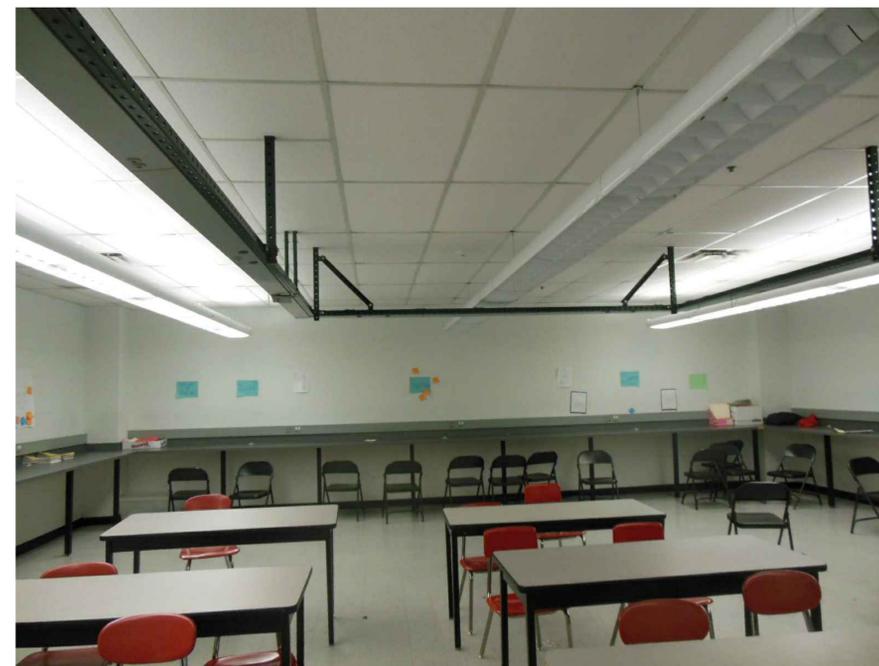


2 EXISTING FIRST FLOOR - OFFICE REFERENCE PHOTO
A-0 SCALE: NOT TO SCALE

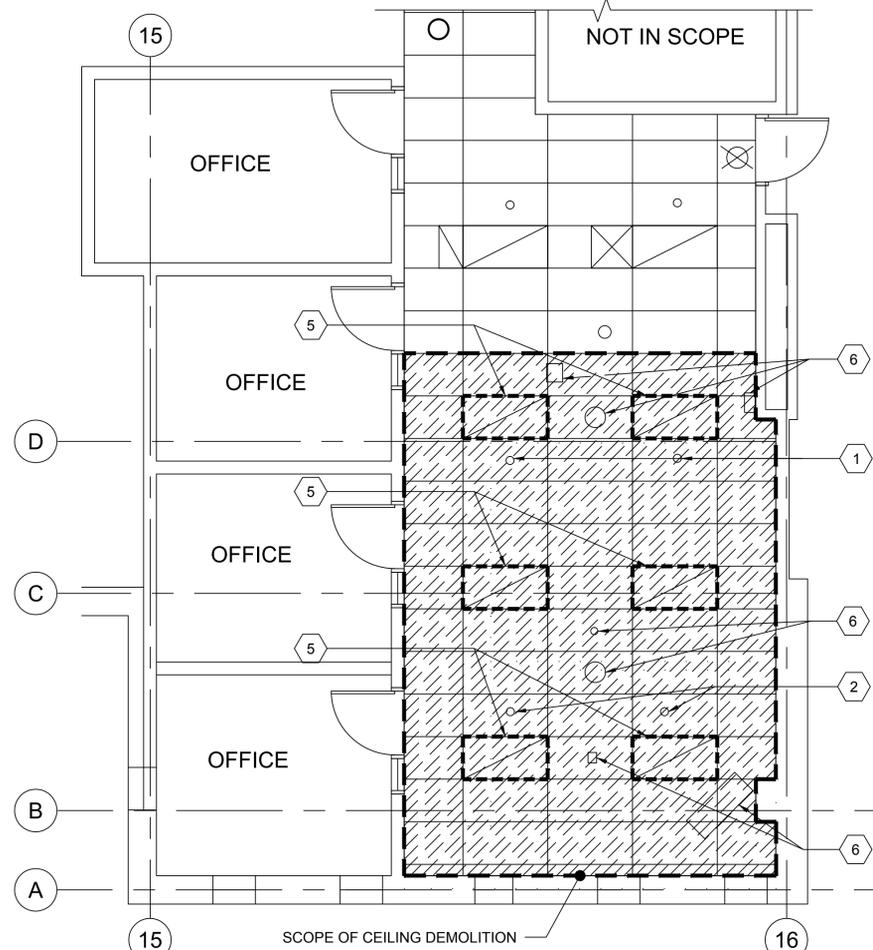
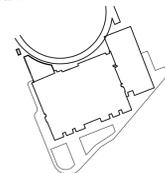


3 EXISTING SECOND FLOOR PLAN
A-0 SCALE: NOT TO SCALE

CLASSROOM
PROJECT LOCATION
REFER TO 3/A-1 (ROOM 1014 AKA 2019)



4 EXISTING SECOND FLOOR - CLASSROOM REFERENCE PHOTO
A-0 SCALE: NOT TO SCALE



1 OFFICE REFLECTED CEILING DEMOLITION PLAN - FIRST FLOOR
AD-1 SCALE: 1/4" = 1'-0"

DEMOLITION KEYNOTES:

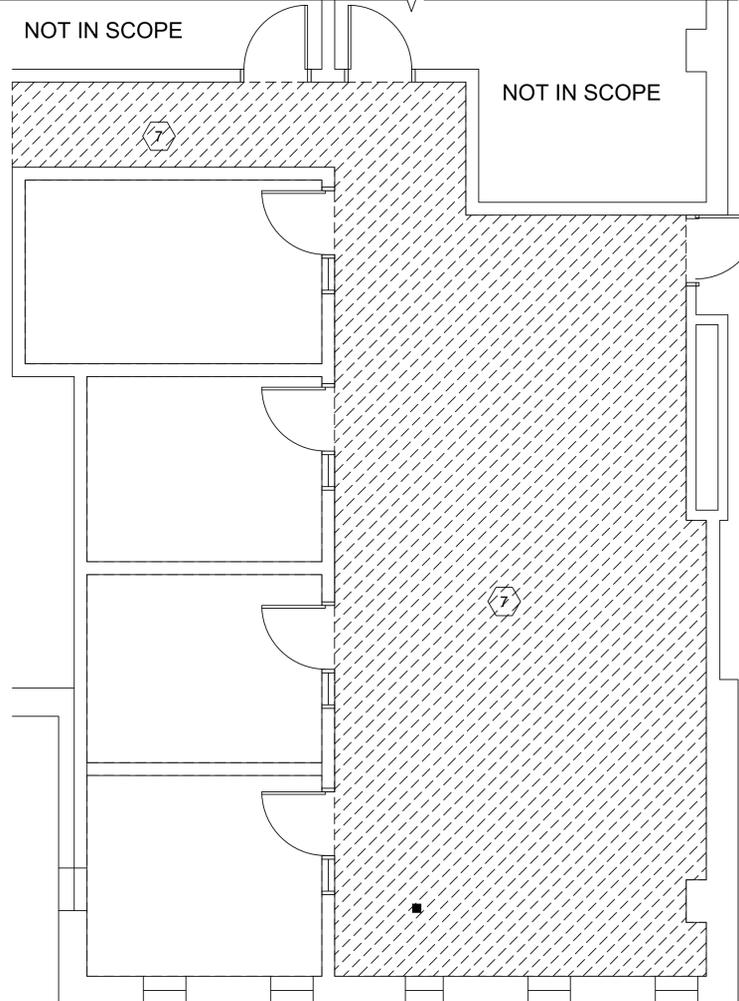
- 1 REMOVE EXISTING CEILING LIGHTING & HVAC DIFFUSERS, SPRINKLERS, DEVICES, SPEAKERS, EQUIPMENT AS REQUIRED FOR NEW OFFICE LAYOUT.
- 2 RELOCATE EXISTING SPRINKLER AS REQUIRED.
- 3 REMOVE EXISTING CONDITION, MASONRY WALL AND EXISTING LOCKERS AND COUNTERTOPS AS REQUIRED FOR NEW CLASSROOM ENTRY. PROVIDE NEW LINTEL SUPPORT AS REQUIRED PER FIELD CONDITION. NEW STEEL LINTEL TO MATCH EXISTING TYPE.
- 4 PER DIRECTION OF OWNER RECONFIGURE, SALVAGE, OR REMOVE AND MODIFY EXISTING COUNTER AS REQUIRED FOR NEW OPENING SEE ELECTRICAL NEW WORKS PLAN FOR WORK RELATED TO EXISTING WALL MOUNTED RACEWAY
- 5 REMOVE AND SALVAGE OR REUSE EXISTING LIGHT FIXTURES, TYP.
- 6 REMOVE AND SALVAGE EXISTING CEILING MOUNTED ITEMS SUCH AS BUT NOT LIMITED TO SPEAKERS, DEVICES, MONITOR, OR ANY OTHER CEILING MOUNTED EQUIPMENT AND FIXTURE
- 7 REMOVE EXISTING CARPET TILES IN ENTIRETY OF GREEN WING OPEN OFFICE SUITE BOUNDED BY DOORS.
- 8 COORDINATE FURNITURE MOVE WITH FACILITIES MANAGEMENT.

GENERAL NOTES:

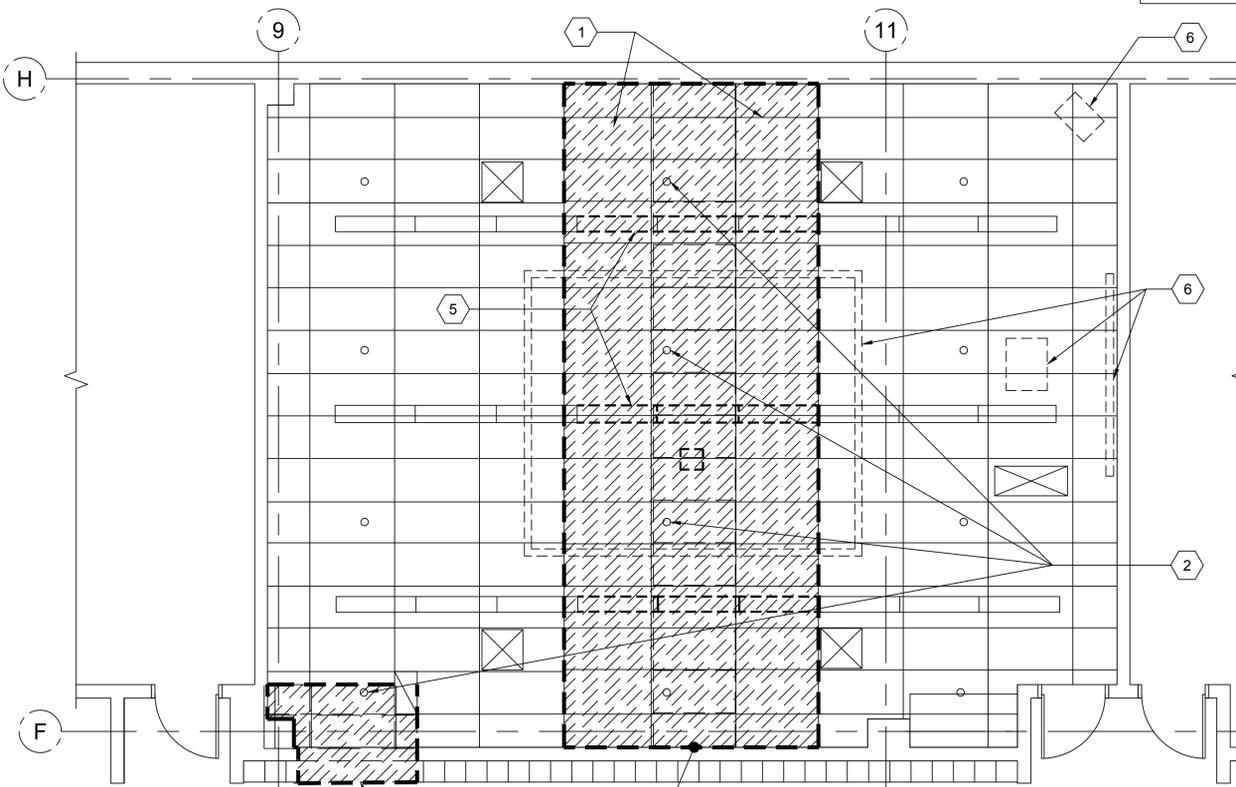
1. UNLESS OTHERWISE NOTED, ALL EXISTING CONDITIONS TO REMAIN AS IS.
2. SEE MEP/FP DRAWINGS FOR ADDITIONAL DEMOLITION SCOPE.
3. GENERAL CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING BUILDING.

LEGEND:

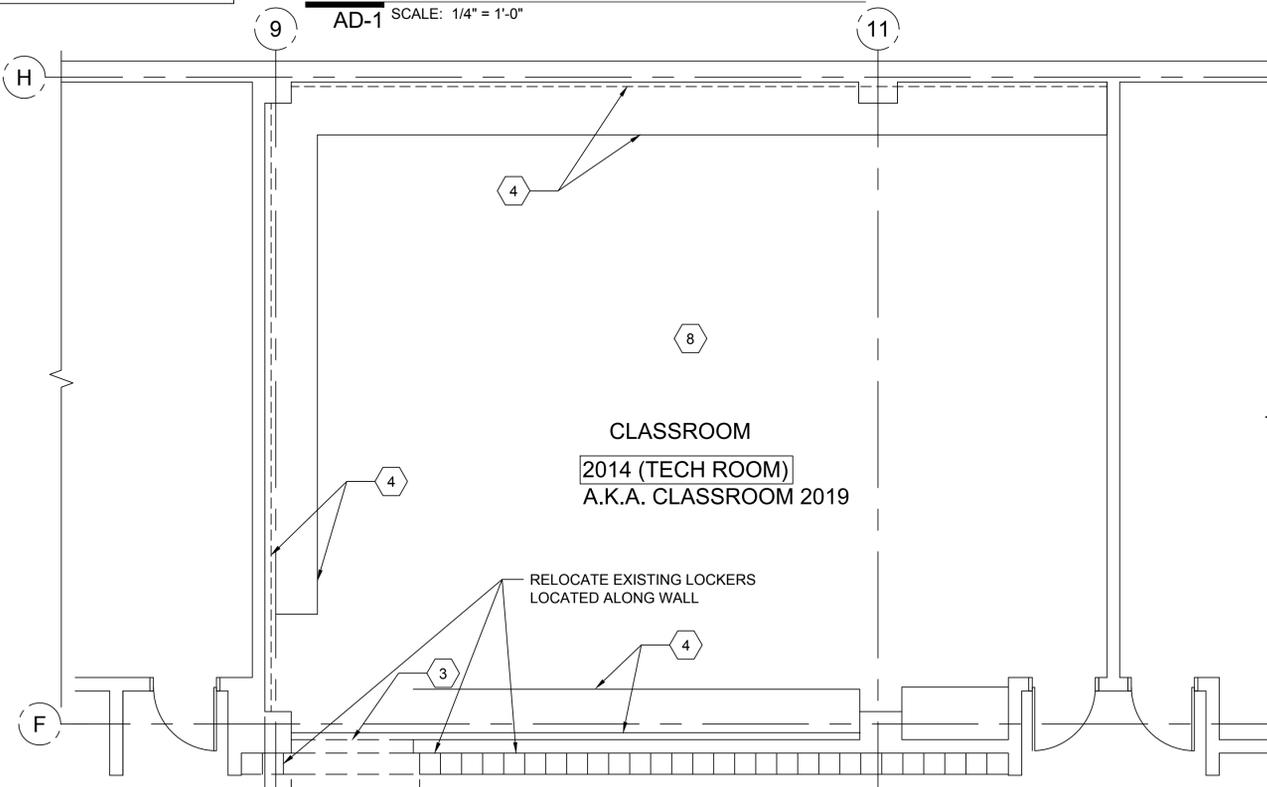
REMOVE AS NOTED



2 OFFICE - FIRST FLOOR DEMOLITION PLAN
AD-1 SCALE: 1/4" = 1'-0"

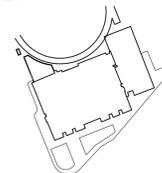


3 CLASSROOM REFLECTED CEILING DEMOLITION PLAN - SECOND FLOOR
AD-1 SCALE: 1/4" = 1'-0"



4 CLASSROOM - SECOND FLOOR DEMOLITION PLAN
AD-1 SCALE: 1/4" = 1'-0"

Jacobs - R:\Chelsea Public Schools\R7W71639_Chelsea HS Interior Renovation\700 CAD\701 Architecture\Sheets\A-0-1-2-3.dwg (A0-1) October 29, 2015 - 9:26am chsld

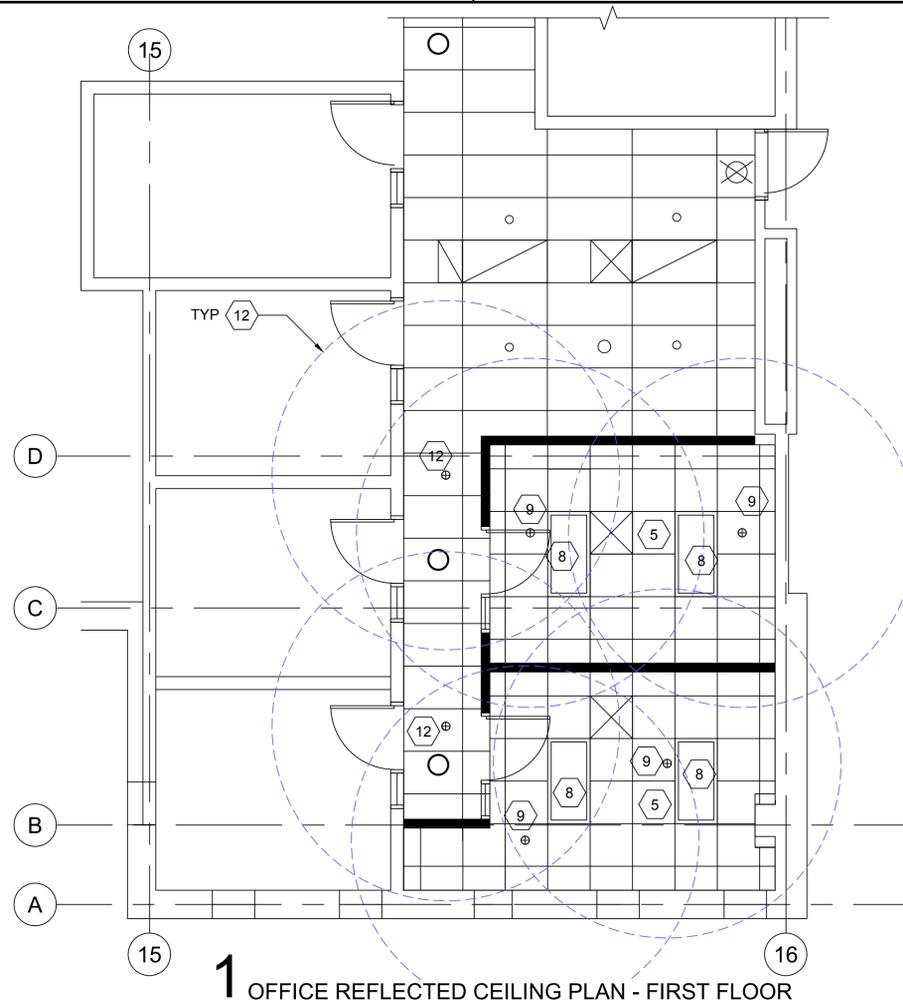


PLAN KEYNOTES:

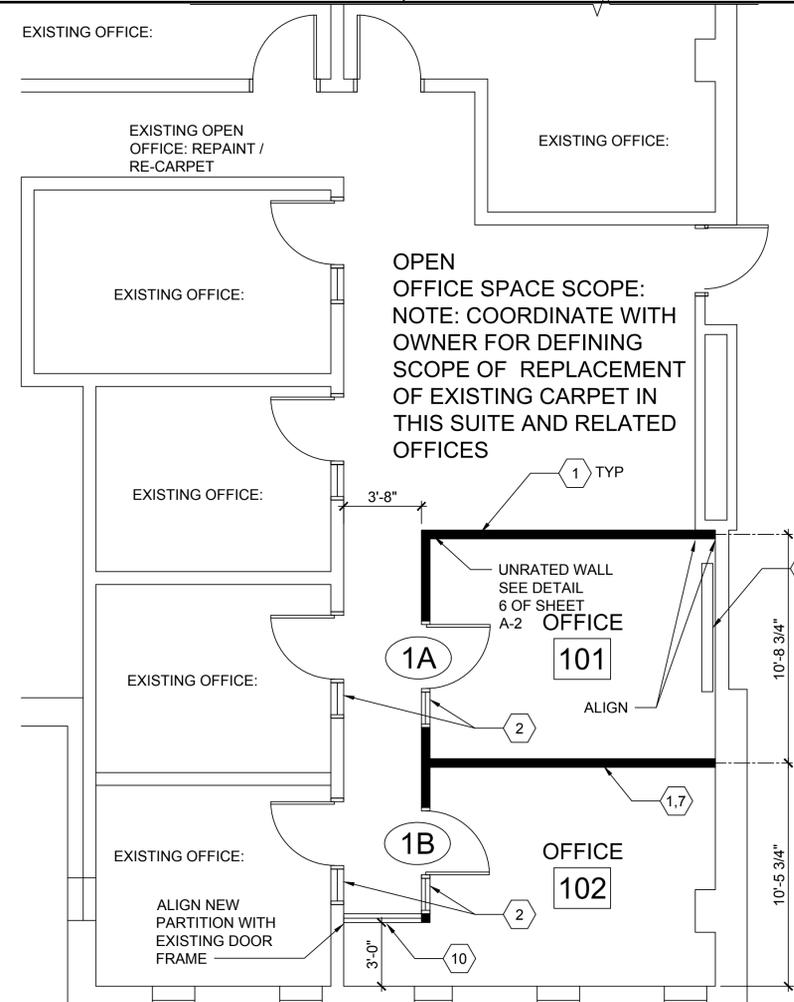
- 1 PROVIDE NEW 3 5/8" METAL STUD PARTITION WITH 5/8" GWB EACH SIDE. EXTEND PARTITION TO DECK. GWB TO EXTEND TO DECK. SEE SHEET A-2, DETAILS 6 AND 8
- 2 NEW DOOR AND SIDE LITE AS SCHEDULED. MATCH EXISTING ADJACENT DOOR FRAME AND SIDE LITE, PAINT FINISH, AND HARDWARE. NOTE THAT EXISTING DOOR AND FRAMES TO REMAIN (ARROW FOR REF. ONLY)
- 3 RECONFIGURE EXISTING PENDANT LIGHTING. PROVIDE 50% OF EXISTING FIXTURES TO EACH CLASSROOM.
- 4 PROVIDE MIN. OF ONE RETURN AIR GRILLE PER EACH CLASSROOM. NEW DUCTED RETURN TO TIE INTO EXISTING RETURN AIR DUCT.
- 5 NEW 2X2 ACT - WHITE.
- 6 NEW 2X4 ACT - WHITE TO MATCH EXISTING.
- 7 RECONFIGURE BASEBOARD HEATER ENCLOSURE AT NEW PARTITION.
- 8 NEW 2X4 LIGHTING.
- 9 RECONFIGURE EXISTING SPRINKLER MINIMUM, 1 HEAD CENTERED IN OFFICE.
- 10 GLASS WALL
- 11 NEW BASE BOARD RADIATOR. CONNECT TO EXISTING SYSTEM.
- 12 NEW SPRINKLER HEADS, DASHED LINES INDICATE COVERAGE AREA. CONNECT TO EXISTING SYSTEM

LEGEND: (NOT ALL DELINEATED)

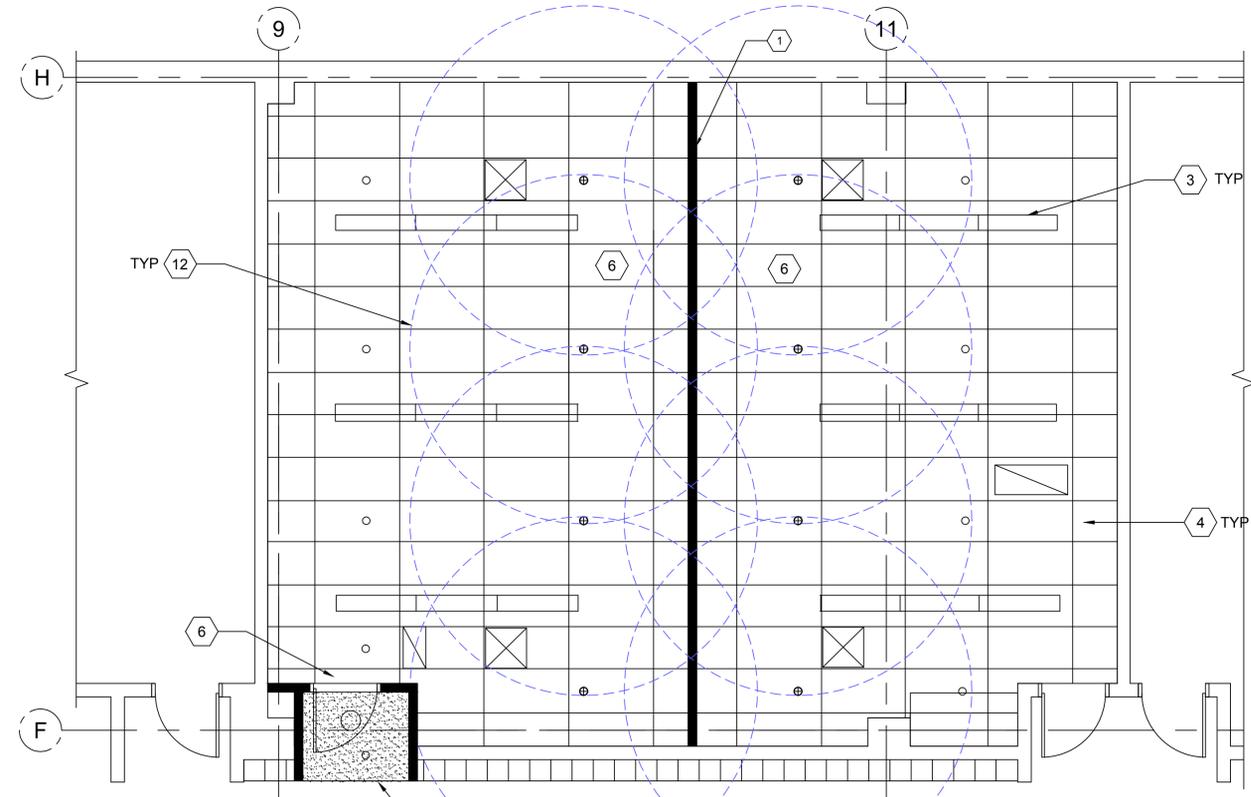
- x KEY NOTES
- NEW WALL
- 1B DOOR KEY, SEE SCHEDULE ON A-2



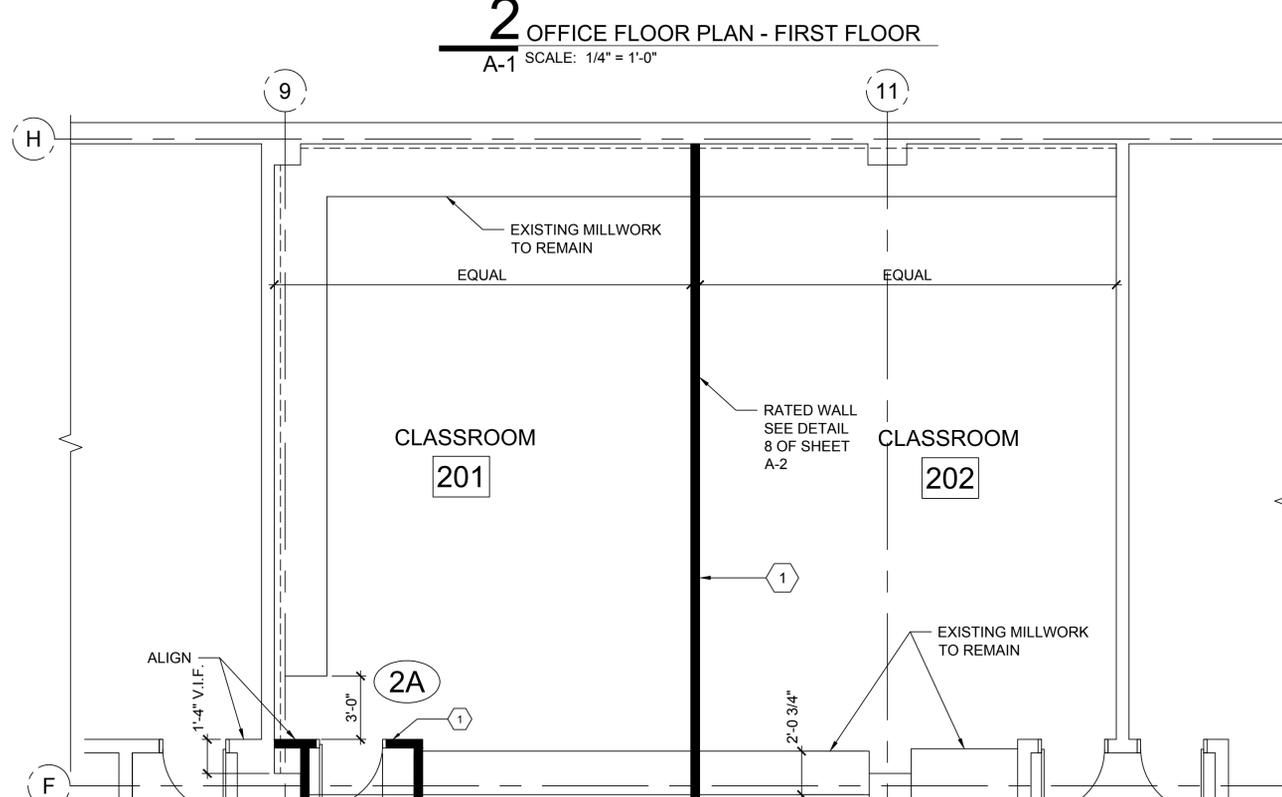
1 OFFICE REFLECTED CEILING PLAN - FIRST FLOOR
A-1 SCALE: 1/4" = 1'-0"



2 OFFICE FLOOR PLAN - FIRST FLOOR
A-1 SCALE: 1/4" = 1'-0"



3 CLASSROOM REFLECTED CEILING PLAN - SECOND FLOOR
A-1 SCALE: 1/4" = 1'-0"



4 CLASSROOM FLOOR PLAN - SECOND FLOOR
A-1 SCALE: 1/4" = 1'-0"

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DIVISION 1 - GENERAL CONDITIONS

PRIOR TO COMMENCEMENT OF WORK OR FABRICATION OF COMPONENTS, CONTRACTOR SHALL INVESTIGATE AND VERIFY IN THE FIELD ALL CONDITIONS, DIMENSIONS, AND ELEVATIONS OF THE EXISTING CONSTRUCTION. ALL DISCREPANCIES BETWEEN FIELD-VERIFIED CONDITIONS, DIMENSIONS AND ELEVATIONS AND THOSE INDICATED ON THE DRAWINGS SHALL BE IMMEDIATELY MADE KNOWN TO THE ARCHITECT IN WRITING. THE USE OF (V.I.F.) OR (+/-) OR OTHER SIMILAR NOTES AT CERTAIN LOCATIONS ON THE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR VERIFYING ALL CONDITIONS AS DESCRIBED ABOVE.

SECTION 011000 - SUMMARY OF WORKS

THIS SECTION USES THE TERM "ARCHITECT ENGINEER." CHANGE THIS TERM TO MATCH THAT USED TO IDENTIFY THE DESIGN PROFESSIONAL AS DEFINED ELSEWHERE IN CONTRACT.

PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS
 - A. GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND OTHER DIVISION 1 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.
 - B. THE LATEST REVISION OR VERSION OF CODES AND STANDARDS REFERENCED WITHIN THE CONTRACT SPECIFICATION SECTION SHALL BE USED.

1.2 PROJECT INFORMATION

- A. IDENTIFY NAME AND LOCATION OF PROJECT AND NAME OF OWNER AND ARCHITECT.
 - 1. PROJECT IDENTIFICATION: PROJECT CONSISTS OF TWO NEW PRIVATE OFFICES AND DIVIDING ONE CLASSROOM INTO TWO CLASSROOMS.
 - 2. PROJECT LOCATION: CHELSEA HIGH SCHOOL, 299 EVERETT AVE., CHELSEA MASSACHUSETTS, 02150.
 - 3. OWNER: CHELSEA PUBLIC SCHOOLS, 500 BROADWAY, CHELSEA, MA 02150.
- B. ENGINEER IDENTIFICATION: THE CONTRACT DOCUMENTS, DATED HEREIN, WERE PREPARED FOR THE PROJECT BY JACOBS PROJECT MANAGEMENT COMPANY, 343 CONGRESS STREET, BOSTON, MASSACHUSETTS, 02210.
- C. CONSTRUCTION MANAGER: CONSTRUCTION MANAGER FOR THIS PROJECT AND SHALL BE PROJECTS CONTRACTOR. IN DIVISIONS 1 THROUGH 26 SPECIFICATIONS, THE TERMS "CONSTRUCTION MANAGER" AND "CONTRACTOR" ARE SYNONYMOUS.
- D. PROJECT COORDINATOR: MR. DAVID FERRARO, DIRECTOR OF FACILITIES MANAGEMENT, CHELSEA PUBLIC SCHOOLS, OR HIS APPOINTEE FOR THE PROJECT COORDINATOR.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. IN GENERAL, THE WORK SHALL CONSIST OF BUT NOT BE LIMITED TO:

CREATE TWO NEW PRIVATE OFFICE SPACES WITH GREEN WING ADMINISTRATIVE OFFICE SUITE AND CREATE TWO NEW CLASSROOMS FROM EXISTING TECHNOLOGY LAB SPACE ON SECOND FLOOR OF HIGH SCHOOL BUILDING. PROJECT WILL BE CONSTRUCTED UNDER A GENERAL CONSTRUCTION CONTRACT WITH THE GENERAL CONTRACTOR ACTING AS THE PRIME CONTRACTOR.

1.4 WORK SEQUENCE AND SCHEDULE

- A. THE CONSTRUCTION SCHEDULE SHALL BE BASED ON THE WORK BEING COMPLETED BY DATE AS AGREED TO BY THE DIRECTOR OF FACILITIES MANAGEMENT FOR THE CHELSEA SCHOOL DEPARTMENT.
- B. CONTRACTOR SHALL SUBMIT A SCHEDULE FOR EACH PHASE OF THE WORK INDICATING SCHEDULED COMPLETION OF WORK AND IDENTIFYING THESE INTERMEDIATE MILESTONES:
 - a. START OF PROJECT CONSTRUCTION.
 - b. DELIVERY OF SUBMITTALS.
 - c. DELIVERY OF MAJOR EQUIPMENT.
 - d. COMPLETION OF NEW INSTALLATIONS.
 - e. TESTING AND COMMISSIONING.
 - f. PROJECT COMPLETION/CLOSEOUT.
- C. THE CONSTRUCTION SCHEDULE SHALL REFLECT THESE MILESTONE DATES:
 - a. CONSTRUCTION SITE STAGING.
 - b. EQUIPMENT DELIVERY SCHEDULE.
 - c. START OF DEMOLITION AND CONSTRUCTION ACTIVITY.
 - d. COMPLETION OF NEW INSTALLATION.
 - e. COMPLETION OF COOLING SYSTEM WORK.
 - f. PROJECT COMPLETION/CLOSEOUT.

1.5 USE OF PREMISES/PERMITS/FEES

- A. GENERAL: CONTRACTOR WILL HAVE LIMITED USE OF PREMISES FOR CONSTRUCTION OPERATIONS DURING CONSTRUCTION PERIOD. CONTRACTOR IS RESPONSIBLE FOR OBTAINING MATERIAL DISPOSAL PERMIT AS WELL AS DUMPSTER SEPARATE FROM THE SCHOOL'S DUMPSTER.

B. SPECIFIC AREAS FOR STAGING AND STORAGE OF CONSTRUCTION MATERIALS WILL BE IDENTIFIED BY THE PROJECT COORDINATOR. STORAGE OF MATERIALS SHALL BE IN CONTRACTOR FURNISHED LOCKED CONTAINERS. NO ADDITIONAL CHARGES WILL BE ACCEPTED FOR LOST OR STOLEN MATERIAL AND TOOLS.

C. CONTRACTOR IS ADVISED THAT SCHOOL IS IN SESSION AND WORK WILL BE ACCOMPLISHED DURING NORMAL SCHOOL ACTIVITIES. NO DISRUPTION, INTERRUPTION, OR ANY OTHER CONTRACTOR ACTIVITY, INCLUDING LIFTING AND RIGGING OPERATIONS, WILL ADVERSELY AFFECT SCHOOL OPERATIONS. CONTRACTOR SHALL PROVIDE SECURITY FOR HIS TOOLS, CONSUMABLES, AND TO THE VARIOUS WORK AREAS DURING THE PERIOD OF CONSTRUCTION.

D. CONTRACTOR IS ADVISED THAT THE SCHOOL IS LOCATED IN A RESIDENTIAL/COMMERCIAL SECTION OF THE CITY AND VEHICULAR ACCESS MAY AT TIMES BECOME CONGESTED AND/OR DIFFICULT. THE MOVEMENT OF THE ANY EQUIPMENT USED TO ACCESS THE CEILING, MAY REQUIRE MOVEMENT IN OFF-PEAK HOURS AND THE USE OF PREMIUM LABOR. SCHEDULED COMPLETION OF THE VARIOUS PHASES OF THE WORK MAY ALSO REQUIRE PREMIUM TIME. CONTRACTOR SHALL SCHEDULE THIS WORK ACCORDINGLY. CONTRACTOR IS RESPONSIBLE FOR OBTAINING HIS OWN ENGINEER TO CERTIFY THAT ANY RIGGING OR STAGING OPERATION ON TOP OF EXISTING GYMNASIUM FLOOR SLAB IS WITHIN SAFETY FACTOR OF STRUCTURAL SUPPORT.

E. CONTRACTOR IS ALSO ADVISED THE SCOPE OF WORK PRESENTS SOME CHALLENGES FOR ACCESS AT THE HIGH SCHOOL. ALL DAMAGES AND REPAIRS TO EXISTING FACILITIES, INCLUDING BUT NOT LIMITED TO FLOORS, WALLS, WINDOWS, EQUIPMENT, FITTINGS, FIXTURES, FINISHES, DOORS, ELEVATORS, CASEWORK, DEVICES, CONDUITS, WIRES, AND ANY OTHER PART OF ORIGINAL BUILDING CONDITION, AS A RESULT OF LIFTING, RIGGING AND RELATED CONSTRUCTION ACTIVITIES, SHALL BE REPAIRED TO THE OWNERS SATISFACTION, AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

F. CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY ALL FEES TO FACILITATE MOVEMENT OF CRANE AND SUBSEQUENT LIFTING ACTIVITIES, INCLUDING, BUT NOT LIMITED TO, CITY OF CHELSEA POLICE DEPARTMENT TRAFFIC DETAILS.

1.6 SPECIFICATION FORMATS AND CONVENTIONS

- A. SPECIFICATION FORMAT: THE SPECIFICATIONS ARE ORGANIZED INTO DIVISIONS AND SECTIONS USING THE 28-DIVISION FORMAT AND CSI/CES'S "MASTERFORMAT" NUMBERING SYSTEM.
- B. SPECIFICATION CONTENT: THE SPECIFICATIONS USE CERTAIN CONVENTIONS FOR THE STYLE OF LANGUAGE AND THE INTENDED MEANING OF CERTAIN TERMS, WORDS, AND PHRASES WHEN USED IN PARTICULAR SITUATIONS. THESE CONVENTIONS ARE AS FOLLOWS:
 - C. ABBREVIATED LANGUAGE: LANGUAGE USED IN THE SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS IS ABBREVIATED. WORDS AND MEANINGS SHALL BE INTERPRETED AS APPROPRIATE. WORDS IMPLIED, BUT NOT STATED, SHALL BE INFERRED AS THE SENSE REQUIRES. SINGULAR WORDS SHALL BE INTERPRETED AS PLURAL AND PLURAL WORDS SHALL BE INTERPRETED AS SINGULAR WHERE APPLICABLE AS THE CONTEXT OF THE CONTRACT DOCUMENTS INDICATES.
 - D. IMPERATIVE MOOD AND STREAMLINED LANGUAGE ARE GENERALLY USED IN THE SPECIFICATIONS. REQUIREMENTS EXPRESSED IN THE IMPERATIVE MOOD ARE TO BE PERFORMED BY CONTRACTOR. OCCASIONALLY, THE INDICATIVE OR SUBJUNCTIVE MOOD MAY BE USED IN THE SECTION TEXT FOR CLARITY TO DESCRIBE RESPONSIBILITIES THAT MUST BE FULFILLED INDIRECTLY BY CONTRACTOR OR BY OTHERS WHEN SO NOTED.
 - a. THE WORDS "SHALL," "SHALL BE," OR "SHALL COMPLY WITH," DEPENDING ON THE CONTEXT, ARE IMPLIED WHERE A COLON (:) IS USED WITHIN A SENTENCE OR PHRASE.

1.7 SUBMITTALS

- A. FIVE (5) COPIES OF EACH SUBMITTAL, AS REQUIRED BY THESE SPECIFICATIONS, SHALL BE DELIVERED FOR REVIEW BY THE ENGINEER. ALL SUBMITTALS SHALL CONFORM TO THE FORMAT AS SPECIFIED HEREIN.
- B. SUBMITTALS SHALL BE IN A BOUND FORMAT, WITH A TITLE PAGE INDICATING THE PROJECT IDENTIFICATION, SUBMITTAL TITLE AND SPECIFICATION REFERENCE.
- C. SUBMITTALS SHALL BE MADE TO EXPEDITE MATERIAL AND EQUIPMENT DELIVERY. NO CLAIM FOR DELAY WILL BE ENTERAINED DUE TO DRAWING SUBMITTAL REVIEW.
- D. PAYMENT WILL BE MADE ON A MONTHLY BASIS PREDICATED ON ENGINEERS AND OWNERS

REPRESENTATIVE REVIEW OF THE WORK AND TIMELY RECEIPT OF SHOP DRAWINGS. DELAYS IN RECEIPT OF SHOP DRAWINGS WILL BE CAUSE FOR DELAYS IN PAYMENT FOR WORK COMPLETED. CONTRACTOR IS ADVISED THAT HIS WORK WILL BE ACCOMPLISHED "AT RISK" WITHOUT ENGINEER APPROVED SHOP DRAWINGS.

END OF SECTION 011000

DIVISION 6. CARPENTRY: (UNLESS OTHERWISE NOTED)

GENERAL:

- 1. STUDING SHALL BE STEEL. SECTIONS SIZED AND SPACED AS SPECIFIED. BLOCKING MAY BE ANY SOUND, STRAIGHT, SOFTWOOD SPECIES WITHOUT LOOSE KNOTS, CHECKS, SPLITS OR OTHER IMPERFECTIONS.
- 2. ALL PLYWOOD SHALL BE SOFTWOOD PLYWOOD OF DOMESTIC MANUFACTURE, AND SHALL BE INSPECTED BY THE AMERICAN PLYWOOD ASSOCIATION, AND HAVE DPFA MARK.
- 3. PROVIDE BLOCKING FOR MOUNTING OF EQUIPMENT ONTO GYPSUM WALL. REVIEW DRAWINGS FOR OTHER ADDITIONAL BLOCKING REQUIREMENTS.

SECTION 078400 - FIRESTOPPING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. WORK INCLUDED: THIS SECTION SPECIFIES THE FOLLOWING:
 - 1. THROUGH-PENETRATION FIRESTOP SYSTEMS FOR PENETRATIONS THROUGH FIRE-RESISTANCE-RATED CONSTRUCTIONS, INCLUDING BOTH EMPTY OPENINGS AND OPENINGS CONTAINING PENETRATING ITEMS.
 - 2. FIRE-RESISTIVE JOINT SYSTEMS FOR FLOOR, WALL, AND HEAD-OF-WALL JOINTS.

1.2 PERFORMANCE REQUIREMENTS

- A. GENERAL: FOR PENETRATIONS THROUGH FIRE-RESISTANCE-RATED CONSTRUCTIONS, INCLUDING BOTH EMPTY OPENINGS AND OPENINGS CONTAINING PENETRATING ITEMS, PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS THAT ARE PRODUCED AND INSTALLED TO RESIST SPREAD OF FIRE ACCORDING TO REQUIREMENTS INDICATED, RESIST PASSAGE OF SMOKE AND OTHER GASES, AND MAINTAIN ORIGINAL FIRE-RESISTANCE RATING OF CONSTRUCTION PENETRATED.
 - B. F-RATED SYSTEMS: PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS WITH F-RATINGS INDICATED, BUT NOT LESS THAN THAT EQUALING OR EXCEEDING FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED, AS DETERMINED PER ASTM E 814.
 - C. FOR THROUGH-PENETRATION FIRESTOP SYSTEMS EXPOSED TO VIEW, TRAFFIC, MOISTURE, AND PHYSICAL DAMAGE, PROVIDE PRODUCTS THAT, AFTER CURING, DO NOT DETERIORATE WHEN EXPOSED TO THESE CONDITIONS BOTH DURING AND AFTER CONSTRUCTION.

- 1. FOR PIPING PENETRATIONS FOR PLUMBING AND WET-PIPE SPRINKLER SYSTEMS, PROVIDE MOISTURE-RESISTANT THROUGH-PENETRATION FIRESTOP SYSTEMS.
- 2. FOR FLOOR PENETRATIONS WITH ANNULAR SPACES EXCEEDING 4 INCHES IN WIDTH AND EXPOSED TO POSSIBLE LOADING AND TRAFFIC, PROVIDE FIRESTOP SYSTEMS CAPABLE OF SUPPORTING FLOOR LOADS INVOLVED, EITHER BY INSTALLING FLOOR PLATES OR BY OTHER MEANS.
- 3. FOR PENETRATIONS INVOLVING INSULATED PIPING, PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS NOT REQUIRING REMOVAL OF INSULATION.

1.3 SUBMITTALS

- A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
- B. SHOP DRAWINGS: FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM, SHOW EACH TYPE OF CONSTRUCTION CONDITION PENETRATED, RELATIONSHIPS TO ADJOINING CONSTRUCTION, AND TYPE OF PENETRATING ITEM. INCLUDE FIRESTOP DESIGN DESIGNATION OF QUALIFIED TESTING AND INSPECTING AGENCY THAT EVIDENCES COMPLIANCE WITH REQUIREMENTS FOR EACH CONDITION INDICATED. SUBMIT DOCUMENTATION, INCLUDING ILLUSTRATIONS, FROM A QUALIFIED TESTING AND INSPECTING AGENCY THAT IS APPLICABLE TO EACH THROUGH-PENETRATION FIRESTOP SYSTEM CONFIGURATION FOR CONSTRUCTION AND PENETRATING ITEMS.
- C. THROUGH-PENETRATION FIRESTOP SYSTEM SCHEDULE: INDICATE LOCATIONS OF EACH THROUGH-PENETRATION FIRESTOP SYSTEM, ALONG WITH THE FOLLOWING INFORMATION:
 - 1. TYPES OF PENETRATING ITEMS.
 - 2. TYPES OF CONSTRUCTIONS PENETRATED, INCLUDING FIRE-RESISTANCE RATINGS AND, WHERE APPLICABLE, THICKNESSES OF CONSTRUCTION PENETRATED.
 - 3. THROUGH-PENETRATION FIRESTOP SYSTEMS FOR EACH LOCATION IDENTIFIED BY FIRESTOP DESIGN DESIGNATION OF QUALIFIED TESTING AND INSPECTING AGENCY.
- D. QUALIFICATION DATA: FOR INSTALLER AND INSPECTION AND TESTING AGENCY.

1.4 QUALITY ASSURANCE

- A. INSTALLER QUALIFICATIONS: EITHER A FIRM THAT HAS BEEN APPROVED BY FM GLOBAL ACCORDING TO FMG 4991, "APPROVAL OF FIRESTOP CONTRACTORS" OR A FIRM EXPERIENCED IN INSTALLING THROUGH-PENETRATION FIRESTOP SYSTEMS SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT, WHOSE WORK HAS RESULTED IN CONSTRUCTION OF A MINIMUM OF FIVE PROJECTS WITH A RECORD OF SUCCESSFUL PERFORMANCE. QUALIFICATIONS INCLUDE HAVING THE NECESSARY EXPERIENCE, STAFF, AND TRAINING TO INSTALL MANUFACTURER'S PRODUCTS PER SPECIFIED REQUIREMENTS.
- B. SOURCE LIMITATIONS: OBTAIN THROUGH-PENETRATION FIRESTOP SYSTEMS, FOR EACH KIND OF PENETRATION AND CONSTRUCTION CONDITION INDICATED, THROUGH ONE SOURCE FROM A SINGLE MANUFACTURER.
- C. FIRE-TEST-RESPONSE CHARACTERISTICS: PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS THAT COMPLY WITH THE FOLLOWING REQUIREMENTS AND THOSE SPECIFIED IN PART 1 "PERFORMANCE REQUIREMENTS" ARTICLE:
 - 1. FIRESTOP TESTS ARE PERFORMED BY A QUALIFIED TESTING AND INSPECTING AGENCY.
 - 2. THROUGH-PENETRATION FIRESTOP SYSTEMS ARE IDENTICAL TO THOSE TESTED PER TESTING STANDARD REFERENCED IN PART 1 "PERFORMANCE" ARTICLE. PROVIDE RATED SYSTEMS COMPLYING WITH THE FOLLOWING REQUIREMENTS:
 - a. THROUGH-PENETRATION FIRESTOP SYSTEM PRODUCTS BEAR CLASSIFICATION MARKING OF QUALIFIED TESTING AND INSPECTING AGENCY.
 - b. THROUGH-PENETRATION FIRESTOP SYSTEMS CORRESPOND TO THOSE INDICATED BY REFERENCE TO THROUGH-PENETRATION FIRESTOP SYSTEM DESIGNATIONS LISTED IN THE UL "FIRE RESISTANCE DIRECTORY".

1.5 DELIVERY, STORAGE, AND HANDLING

- A. DELIVER THROUGH-PENETRATION FIRESTOP SYSTEM PRODUCTS TO PROJECT SITE IN ORIGINAL, UNOPENED CONTAINERS OR PACKAGES WITH INTACT AND LEGIBLE MANUFACTURER'S LABELS IDENTIFYING PRODUCT AND MANUFACTURER, DATE OF MANUFACTURE, LOT NUMBER, SHELF LIFE IF APPLICABLE, QUALIFIED TESTING AND INSPECTING AGENCY'S CLASSIFICATION MARKING APPLICABLE TO PROJECT, CURING TIME, AND MIXING INSTRUCTIONS FOR MULTICOMPONENT MATERIALS.
- B. STORE AND HANDLE MATERIALS FOR THROUGH-PENETRATION FIRESTOP SYSTEMS TO PREVENT THEIR DETERIORATION OR DAMAGE DUE TO MOISTURE, TEMPERATURE CHANGES, CONTAMINANTS, OR OTHER CAUSES.

1.6 PROJECT CONDITIONS

- A. ENVIRONMENTAL LIMITATIONS: DO NOT INSTALL THROUGH-PENETRATION FIRESTOP SYSTEMS WHEN AMBIENT OR SUBSTRATE TEMPERATURES ARE OUTSIDE LIMITS PERMITTED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURERS OR WHEN SUBSTRATES ARE WET DUE TO RAIN, FROST, CONDENSATION, OR OTHER CAUSES.
- B. VENTILATE THROUGH-PENETRATION FIRESTOP SYSTEMS PER MANUFACTURER'S WRITTEN INSTRUCTIONS BY NATURAL MEANS OR, WHERE THIS IS INADEQUATE, FORCED-AIR CIRCULATION.

1.7 COORDINATION

- A. COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO ENSURE THAT THROUGH-PENETRATION FIRESTOP SYSTEMS ARE INSTALLED ACCORDING TO SPECIFIED REQUIREMENTS.
- B. COORDINATE SIZING OF SLEEVES, OPENINGS, CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE THROUGH-PENETRATION FIRESTOP SYSTEMS.
- C. DO NOT COVER UP THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATIONS THAT WILL BECOME CONCEALED BEHIND OTHER CONSTRUCTION UNTIL EACH INSTALLATION HAS BEEN INSPECTED BY THE BUILDING INSPECTOR, IF REQUIRED BY AUTHORITIES HAVING JURISDICTION.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. AVAILABLE PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, THROUGH-PENETRATION FIRESTOP SYSTEMS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO,

THE FOLLOWING:

- 1. HILTI, INC.
- 2. BIOFRESHIELD, RECTORSAL CORPORATION.
- 3. 3M; FIRE PROTECTION PRODUCTS DIVISION.
- 4. OR APPROVED EQUAL.

2.2 FIRESTOPPING MATERIALS

- A. COMPATIBILITY: PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS THAT ARE COMPATIBLE WITH ONE ANOTHER, WITH THE SUBSTRATES FORMING OPENINGS, AND WITH THE ITEMS, IF ANY, PENETRATING THROUGH-PENETRATION FIRESTOP SYSTEMS, UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.
- B. MATERIALS: PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS CONTAINING PRIMARY MATERIALS AND FILL MATERIALS WHICH ARE PART OF THE TESTED ASSEMBLIES INDICATED IN THE THROUGH-PENETRATION FIRESTOP SYSTEM SCHEDULE AT THE END OF PART 3. FILL MATERIALS ARE THOSE REFERRED TO IN DIRECTORIES OF REFERENCED TESTING AND INSPECTING AGENCIES AS "FILL", "VOID" OR "CAVITY" MATERIALS.
- C. ACCESSORIES: PROVIDE COMPONENTS FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS AND TO COMPLY WITH REQUIREMENTS IN THIS SECTION. USE ONLY COMPONENTS SPECIFIED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOP SYSTEMS INDICATED

2.3 MIXING

- A. FOR THOSE PRODUCTS REQUIRING MIXING BEFORE APPLICATION, COMPLY WITH THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS FOR ACCURATE PROPORTIONING OF MATERIALS, WATER (IF REQUIRED), TYPE OF MIXING EQUIPMENT, SELECTION OF MIXER SPEEDS, MIXING CONTAINERS, MIXING TIME, AND OTHER ITEMS OR PROCEDURES NEEDED TO PRODUCE PRODUCTS OF UNIFORM QUALITY WITH OPTIMUM PERFORMANCE CHARACTERISTICS FOR APPLICATION INDICATED.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. EXAMINE SUBSTRATES AND CONDITIONS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR OPENING CONDITIONS, PENETRATING ITEMS, SUBSTRATES, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF WORK. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.2 PREPARATION

- A. SURFACE CLEANING: CLEAN OUT OPENINGS IMMEDIATELY BEFORE INSTALLING THROUGH-PENETRATION FIRESTOP SYSTEMS TO COMPLY WITH FIRESTOP SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS AND WITH THE FOLLOWING REQUIREMENTS:
 - 1. REMOVE FROM SURFACES OF OPENING SUBSTRATES AND FROM PENETRATING ITEMS FOREIGN MATERIALS THAT COULD INTERFERE WITH ADHESION OF THROUGH-PENETRATION FIRESTOP SYSTEMS.
 - 2. CLEAN OPENING SUBSTRATES AND PENETRATING ITEMS TO PRODUCE CLEAN, SOUND SURFACES CAPABLE OF DEVELOPING OPTIMUM BOND WITH THROUGH-PENETRATION FIRESTOP SYSTEMS. REMOVE LOOSE PARTICLES REMAINING FROM CLEANING OPERATION.
 - 3. REMOVE LATANCE AND FORM-RELEASE AGENTS FROM CONCRETE.
- B. PRIMING: PRIME SUBSTRATES WHERE RECOMMENDED IN WRITING BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER USING THAT MANUFACTURER'S RECOMMENDED PRODUCTS AND METHODS. CONFINE PRIMERS TO AREAS OF BOND; DO NOT ALLOW SPILLAGE AND MIGRATION ONTO EXPOSED SURFACES.
- C. MASKING TAPE: USE MASKING TAPE TO PREVENT THROUGH-PENETRATION FIRESTOP SYSTEMS FROM CONTACTING ADJOINING SURFACES THAT WILL REMAIN EXPOSED ON COMPLETION OF WORK AND THAT WOULD OTHERWISE BE PERMANENTLY STAINED OR DAMAGED BY SUCH CONTACT OR BY CLEANING METHODS USED TO REMOVE SMEARS FROM FIRESTOP SYSTEM MATERIALS. REMOVE TAPE AS SOON AS POSSIBLE WITHOUT DISTURBING FIRESTOP SYSTEMS SEAL WITH SUBSTRATES.

3.3 THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATION

- A. GENERAL: INSTALL THROUGH-PENETRATION FIRESTOP SYSTEMS TO COMPLY WITH REQUIREMENTS IN THIS SECTION AND WITH FIRESTOP SYSTEM MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND PUBLISHED DRAWINGS FOR PRODUCTS AND APPLICATIONS INDICATED.
- B. INSTALL FORMING/DAMMING/BACKING MATERIALS AND OTHER ACCESSORIES OF TYPES REQUIRED TO SUPPORT FILL MATERIALS DURING THEIR APPLICATION AND IN THE POSITION NEEDED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS REQUIRED TO ACHIEVE FIRE RATINGS INDICATED.
- C. INSTALL FILL MATERIALS FOR FIRESTOP SYSTEMS BY PROVEN TECHNIQUES TO PRODUCE THE FOLLOWING RESULTS:
 - 1. FILL VOIDS AND CAVITIES FORMED BY OPENINGS, FORMING MATERIALS, ACCESSORIES, AND PENETRATING ITEMS AS REQUIRED TO ACHIEVE FIRE-RESISTANCE RATINGS INDICATED.
 - 2. APPLY MATERIALS SO THEY CONTACT AND ADHERE TO SUBSTRATES FORMED BY OPENINGS AND PENETRATING ITEMS.
 - 3. FOR FILL MATERIALS THAT WILL REMAIN EXPOSED AFTER COMPLETING WORK, FINISH TO PRODUCE SMOOTH, UNIFORM SURFACES THAT ARE FLUSH WITH ADJOINING FINISHES.

3.4 FIELD QUALITY CONTROL

- A. INSPECTING AGENCY: ENGAGE A QUALIFIED, INDEPENDENT INSPECTING AGENCY TO INSPECT THROUGH-PENETRATION FIRESTOP SYSTEMS. IDENTIFIED INSPECTING AGENCY SHALL COMPLY WITH ASTM E 2174 REQUIREMENTS INCLUDING THOSE RELATED TO QUALIFICATIONS, CONDUCTING INSPECTIONS, AND PREPARING TEST REPORTS.
- B. WHERE DEFICIENCIES ARE FOUND, REPAIR OR REPLACE THROUGH-PENETRATION FIRESTOP SYSTEMS SO THEY COMPLY WITH REQUIREMENTS.
- C. PROCEED WITH ENCLOSING THROUGH-PENETRATION FIRESTOP SYSTEMS WITH OTHER CONSTRUCTION ONLY AFTER INSPECTION REPORTS ARE ISSUED AND FIRESTOP INSTALLATIONS COMPLY WITH REQUIREMENTS.

3.5 CLEANING AND PROTECTING

- A. CLEAN OFF EXCESS FILL MATERIALS ADJACENT TO OPENINGS AS WORK PROGRESSES BY METHODS AND WITH CLEANING MATERIALS THAT ARE APPROVED IN WRITING BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURERS AND THAT DO NOT DAMAGE MATERIALS IN WHICH OPENINGS OCCUR.
- B. PROVIDE FINAL PROTECTION AND MAINTAIN CONDITIONS DURING AND AFTER INSTALLATION THAT ENSURE THAT THROUGH-PENETRATION FIRESTOP SYSTEMS ARE WITHOUT DAMAGE OR DETERIORATION AT TIME OF SUBSTANTIAL COMPLETION. IF, DESPITE SUCH PROTECTION, DAMAGE OR DETERIORATION OCCURS, CUT OUT AND REMOVE DAMAGED OR DETERIORATED THROUGH-PENETRATION FIRESTOP SYSTEMS IMMEDIATELY AND INSTALL NEW MATERIALS TO PRODUCE SYSTEMS COMPLYING WITH SPECIFIED REQUIREMENTS.

END OF SECTION 078400

DIVISION 8. DOORS AND WINDOWS: (UNLESS OTHERWISE NOTED)

ALL NEW DOORS, FRAMES, FINISHES, HARDWARE SHALL MATCH EXISTING CONDITION ADJACENT TO PROPOSED. G.C. SHALL PROVIDE SHOP DRAWINGS IN FORM OF SUBMITTALS TO ARCHITECT FOR FINAL REVIEW AND APPROVAL FOR PROCUREMENT.

- 1. SOLID CORE FLUSH WOOD DOORS: SHALL BE FLUSH TYPE. SOLID CORE FLUSH WOOD DOORS SHALL BE FLUSH TYPE, 1 1/2" THICK. AS INDICATED, OF 5-PLY CONSTRUCTION WITH FACE VENEERS BONDED TO BOTH FACES. CORES SHALL BE LOW DENSITY WOOD BLOCKS BONDED TOGETHER WITH WATER-RESISTANT ADHESIVE UNDER HEAT AND PRESSURE. CROSS BANDS SHALL BE THOROUGHLY KILN-DRIED HARDWOOD, 1/4" THICK, EXTENDING FULL WIDTH OF DOOR.

- A. VENEERS FOR DOORS SHALL BE ROTARY CUT WHITE BIRCH PREMIUM GRADE. FOR FINISH AS CALLED FOR ON THE DRAWINGS.
- B. DOORS SHALL MEET OR EXCEED COMMERCIAL STANDARD CS 171
- 2. ALL NEW DOOR FRAMES SHALL BE HOLLOW METAL FRAMES.
- 3. FURNISH AND INSTALL DOOR HARDWARE PER BUILDING STANDARDS. ALL DOOR HARDWARE SHALL BE COMMERCIAL GRADE MATCHING THE EXISTING STYLE, FINISH AND GRADE. ALL DOOR LOCKS SHALL BE BEST RATED.
- 4. DOORS SHALL BE FURNISHED WITH THE FOLLOWING HARDWARE:

	SET A (OFFICE)
1.5	BUTTS 4 1/2" x 4 1/4" NRP US260
PR	
1 EA.	CYLINDRICAL LOCK US260
	F81-2
	OFFICE FUNCTION
3 EA	SILENCERS GREY
1 EA.	FLOOR STOP US260

DIVISION 9. FINISHES: (UNLESS OTHERWISE NOTED)

METAL STUDS AND GYPSUM DRYWALL:

- 1. METAL STUDS SHALL BE 1 1/2" x 4" OR 6" THICK AS REQUIRED TO MATCH EXISTING WALL THICKNESS AND 25, 20 OR 18 GAUGE IF SO NOTED NOTED ON THE DRAWINGS IN ONE PIECE WITHOUT SPLICES. STUDS SHALL BE AS MANUFACTURED BY NATIONAL GYPSUM, U.S. GYPSUM CO. OR APPROVED EQUAL. STUDY THE DRAWINGS CAREFULLY FOR EXACT LIMITS OF DIFFERENT SIZE AND GAUGE OF METAL STUDS.

- 2. GYPSUM BOARD SHALL BE SHEETROCK AS SUPPLIED BY THE U.S. GYPSUM CO., OR APPROVED EQUAL. ALL BOARDS SHALL HAVE TAPERED EDGES. TAPE, FILLER MATERIALS, AND ALL WORKMANSHIP SHALL BE IN ACCORDANCE WITH U.S. GYPSUM COMPANY PERFA-TAPE SYSTEM AND USING U.S. GYPSUM CO. MATERIALS. GYPSUM BOARD SHALL BE TAPED IN ALL AREAS, BUT FINISHED ONLY WHERE CALLED FOR.

- 3. ALL MATERIALS SPECIFIED ABOVE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

- 4. SCREWS FROM GYPSUM BOARD TO METAL FRAMING SHALL BE PHILLIPS HEAD U.S. GYPSUM CO. TYPE S-12 BUGLE HEAD SCREWS 1" LONG.

- 5. SCREWS FROM STUDS TO TRACK, ETC. SHALL BE FASTENERS DESIGNED FOR THE PARTICULAR APPLICATION. GYPSUM BOARD SHALL BE INSTALLED ON METAL STUDS WITH SCREWS 12" O.C. TO ALL STUDS EXCEPT 8" O.C. AROUND THE PERIMETER OF THE SHEETS INCLUDING INTO TRACKS TOP AND BOTTOM. SCREWS SHALL BE LOCATED 1/2" FROM EDGE OF SHEET AND SHALL BE PULLED UP TO PROVIDE UNIFORM DIMPLE 1/32" DEEP. INSTALL CORNER BEAD ON ALL OUTSTANDING CORNERS AND CASING BEADS AT ALL DISCONTINUOUS EDGES.

- 6. USE DOUBLE STUDS ON EACH SIDE OF DOORS OR OTHER OPENINGS AND 3 STUDS AT CORNERS. ALL STUDS SHALL BE FASTENED TO TRACKS OR BRACES WITH AT LEAST TWO 1/2" SCREWS EXCEPT WHERE SUSPENDED IN WHICH CASE USE FOUR SCREWS PER STUD. USE 1/2" STEFFENING CHANNELS TO BRIDGE STUDDING MIDHEIGHT IF PARTITION IS OVER 9'6" HIGH.
- 7. FURNISH AND INSTALL FIBERGLASS INSULATION WHERE 2" SOUND ATTENUATION IS SHOWN ON THE DRAWINGS.

CEILING TILE:

- 1. THE CONTRACTOR SHALL PROVIDE NEW TILE TO MATCH EXISTING BUILDING AS PART OF THIS SCOPE. PROVIDE SAMPLES OF MATCHING PRODUCT BY ARMSTRONG INC.

- 2. CEILING TILE AND GRID SHALL BE INSTALLED IN ACCORDANCE WITH THE TILE MANUFACTURERS RECOMMENDATIONS.

FLOOR CARPET:

- 1. THE CONTRACTOR SHALL INSTALL NEW CARPET TILE, FLOORING AND RUBBER BASE BY JOHNSONITE IN THE OFFICE AREAS. TYPICAL PROVIDE MOHAWK PRODUCTS DOCTOR OR DOCTOR II SAMPLES OR EQUIVALENT. PROVIDE JOHNSONITE PRODUCTS TO MATCH EXISTING OR EQUIVALENT.

- 2. CARPET FLOORING SHALL BE INSTALLED TO MATCH EXISTING AND IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS.
- 3. OPEN OFFICE SPACE SCOPE: COORDINATE WITH OWNER FOR DEFINING SCOPE OF REPLACEMENT OF EXISTING CARPET IN THIS SUITE AND RELATED OFFICES

SECTION 099000 - PAINTING:

CONTRACTOR SHALL NOTE THAT ALL NEW WALLS WILL BE PAINTED TO MATCH EXISTING COLORS IN ORIGINAL SPACES. IN THE CLASSROOM, CONTRACTOR SHALL MATCH EXISTING COLOR AND FINISH. IN THE NEW OFFICE SPACES, THE INSIDE WALLS OF THE NEW OFFICES WILL BE PAINTED LIGHT GRAY TO MATCH EXISTING IN OPEN OFFICE SPACE. THE OUTSIDE WALLS OF THE NEW OFFICE WALLS WILL BE PAINTED TO MATCH GREEN OF THE EXISTING SUITE. ALL NEW DOORS AND FRAMES TO BE FINISHED WITH PAINT TO MATCH EXISTING CONDITION OF CLOSEST EXISTING ADJACENT DOORS.

- 1. ALL MATERIALS USED SHALL BE BEST GRADE PRODUCTS OF THEIR RESPECTIVE KINDS. CORRESPONDING PRODUCTS OF THE BELOW LISTED MANUFACTURERS MAY BE SUBSTITUTED. COATING OF ONE MANUFACTURER SHALL BE USED THROUGHOUT THE WORK EXCEPT AS OTHERWISE SPECIFIED.

- A. BENJAMIN MOORE
- B. DUPONT
- C. SHERWIN WILLIAMS
- 2. THE PAINT CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROPER PERFORMANCE OF ALL MATERIALS USED.
- 3. OTHER PAINTING MATERIALS REQUIRED, BUT NOT SPECIFICALLY DESCRIBED, SUCH AS LINSEED OIL, SHELLAC, TURPENTINE, THINNER, ETC., SHALL BE OF THE HIGHEST QUALITY AND SHALL HAVE IDENTIFYING LABELS ON CONTAINERS.
- 4. THE PAINT CONTRACTOR SHALL PREPARE SURFACES IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTION APPLICABLE TO EACH OF THE MATERIALS AND PROJECT CONDITIONS.
- 5. THE ARCHITECT AND THE OWNER SHALL SELECT ALL PAINT COLORS WHICH WILL BE FROM THE COLOR STANDARDS CURRENTLY USED AT CHELSEA HIGH SCHOOL.
- 6. FINISHED WORK SHALL BE UNIFORM APPROVED COLOR, WITH EDGES OF PAINT ADJOINING OTHER MATERIALS OR COLORS SHARP AND CLEAN WITHOUT OVERLAPPING.
- 7. PAINT ALL EXPOSED METALS ONE COAT OVER NEW PRIMER.

CONSULTANTS

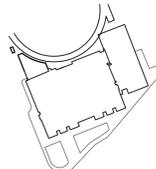
Revision:

Date: By: Description:

CLIENT AND/OR PROJECT INFO.

CHELSEA HIGH SCHOOL
299 EVERETT AVE.
CHELSEA, MA

Key Plan:

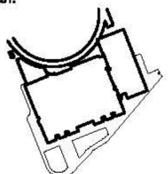


Scale:

Jacobs Project No.: R7W71639

Drawing Title:
SPECIFICATIONS

Date: October 2015
Designed By: G.B.
Drawn By: G.B.
Checked By: -
Drawing No.: **A-3**



GENERAL NOTES:

- ALL WIRING AND EQUIPMENT SHALL BE UL LISTED & LABELED, NEW AND INSTALLED IN CONFORMANCE WITH THE MASSACHUSETTS STATE BUILDING, ELECTRICAL CODES AND NFPA 72.
- PATCHING AND MAINTAINING FIRE RATINGS ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- NEW INSTALLED CONDUITS IN OUTDOOR LOCATIONS SHALL BE RIGID GALVANIZED STEEL. NOT ALL CONDUITS AND JUNCTION BOXES ARE SHOWN. COORDINATE ROUTING OF CONDUITS AND THE INSTALLATION OF JUNCTION BOXES IN THE FIELD.
- ELECTRICAL CONTRACTOR TO CORE DRILL FOR CONDUITS ENTERING AND LEAVING THE FACILITY. ALL PENETRATIONS SHALL BE FIRE SEALED WITH HILTI FIRE SEAL OR OWNER APPROVED SEAL TO MAINTAIN THE FACILITY EXISTING FIRE RATING. NOTIFY THE OWNER OF PROPOSED CORE DRILL LOCATIONS PRIOR TO DRILLING.
- UNLESS OTHERWISE INDICATED, ALL WIRING SHALL BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. CONDUIT SHALL BE 3/4" MINIMUM.
- THE DRAWINGS ARE SCHEMATIC AND ARE NOT INTENDED TO SHOW ALL EXISTING INTERIOR WALLS OR EVERY PROPOSED OFFSET OR FITTING. THE DRAWINGS ARE NOT INTENDED TO SERVE AS SHOP DRAWINGS.
- ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF LUMINAIRES WITH OTHER TRADES.
- ELECTRICAL CONTRACTOR SHALL PICK UP ALL LOOSE MATERIALS AND TRASH EVERY NIGHT.
- ELECTRICAL CONTRACTOR TO FURNISH A COPY OF THE ELECTRICAL PERMIT APPLICATION AND COMPLETED PERMIT TO THE OWNER.
- ELECTRICAL CONTRACTOR SHALL IMMEDIATELY CHECK ALL DRAWINGS FURNISHED UPON THEIR RECEIPT AND SHALL PROMPTLY NOTIFY THE AUTHORITY OF ANY DISCREPANCIES.
- ELECTRICAL CONTRACTOR SHALL FIELD VERIFY ALL MEASUREMENTS BEFORE LAYING OUT THE WORK AND SHALL BE RESPONSIBLE FOR ANY ERRORS WHICH MIGHT HAVE BEEN AVOIDED THEREBY.
- PROVIDE EACH 120V, 20A BRANCH CIRCUIT FROM LIGHTING AND APPLIANCE PANELBOARDS WITH A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR. NO SHARED NEUTRALS ARE PERMITTED UNLESS OTHERWISE INDICATED. BRANCH CIRCUIT HOME RUN WIRING MAY BE COMBINED UP TO MAXIMUM OF (8) CURRENT CARRYING CONDUCTORS IN A CONDUIT SIZED PER NFPA 70. NEUTRALS SHALL BE INCLUDED AS CURRENT CARRYING CONDUCTORS.
- PROVIDE NO 12 AWG PHASE, NEUTRAL AND GROUND CONDUCTOR FOR 120VOLT, 20 AMPERE BRANCH CIRCUITS NOT EXCEEDING 100 FEET. PROVIDE 10 AWG PHASE, NEUTRAL, AND GROUND CONDUCTORS FOR 120 VOLT, 20 AMPERE BRANCH CIRCUITS EXCEEDING 100 FEET AND FOR 277 VOLT, 20 AMPERE CIRCUITS EXCEEDING 200 FEET.
- PANEL LOAD AMPS INDICATE PROJECT LOADS ONLY. ELECTRICAL CONTRACTOR TO METER ASSOCIATED EXISTING PANEL POWER DEMAND OVER A 15 MINUTE PERIOD FOR 30 CONTIGUOUS DAYS DURING OCCUPIED BUILDING OPERATION THAT ADDED LOAD DOES NOT EXCEED 80% OF MAINFEEDER CIRCUIT BREAKER RATING PRIOR CONNECTING TO NEW LOAD.
- FIXTURE DESIGNATED AS EMERGENCY LIFE SAFETY SHALL BE CONNECTED TO THE EXISTING EMERGENCY LIFE SAFETY CIRCUIT.
- VERIFY EXACT MOUNTING CONDITIONS AND PROVIDE APPROPRIATE ACCESSORIES AND HARDWARE TO ACCOMMODATE REQUIREMENTS.
- PROVIDE INFILL CEILING SYSTEM TO MATCH EXISTING IN AREAS WHERE EXISTING LUMINAIRES ARE REMOVED AND NOT REPLACED WITH NEW LUMINAIRES.
- CIRCUIT BREAKER TO BE REUSED SHALL BE TEST PER NETA STANDARD INCLUDING CURRENT INJECTION TEST AND REINSTALLED.

GENERAL DEMOLITION NOTES:

- REFER TO SPECIFICATIONS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
- GENERAL DEMOLITION WORK SHALL BE DONE BY THE ELECTRICAL CONTRACTOR UNLESS OTHERWISE INDICATED. COORDINATE ALL WORK CONCERNING EXISTING EQUIPMENT AND SERVICES REMAINING IN THE BUILDING. DE-ENERGIZE CIRCUITS AND RECONNECT CIRCUITS TO REMAIN THAT ARE DISRUPTED DURING DEMOLITION.
- VISIT SITE AND FIELD VERIFY THE NUMBER OF DEVICES WITHIN THE CONSTRUCTION PHASE AREA PRIOR TO THE BID AND REMOVAL. THE DRAWINGS DO NOT LIMIT THE AMOUNT OF DEMOLITION WORK REQUIRED. ELECTRICAL CONTRACTOR MUST PERFORM THE DEMOLITION WORK AS INDICATED ON THE DEMOLITION DRAWINGS AND AS REQUIRED FOR THE NEW WORK.
- MAINTAIN AND RESTORE, IF INTERRUPTED BY REMOVALS OR IN PATH OF NEW CONSTRUCTION, ALL CIRCUITS, CONDUITS AND FEEDERS PASSING THROUGH AND SERVING UNDISTURBED AREAS (SHOWN OR NOT SHOWN). VERIFY CIRCUITS, DEVICES, AND EQUIPMENT SCHEDULED FOR REMOVAL TO ASSURE THAT THEIR REMOVAL WILL NOT ADVERSELY AFFECT ADJACENT AREAS NOT BEING RENOVATED.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE INTEGRITY AND CONDITION OF THE EXISTING BRANCH CIRCUIT WIRING WHICH IS TO BE RE-USED FOR NEW EQUIPMENT. WIRING FOUND TO BE NON-FUNCTIONAL SHALL BE REPLACED.
- WHERE EXISTING EQUIPMENT IS TO BE RELOCATED, THE EXISTING WIRING SHALL BE EXTENDED TO THE NEW LOCATION OR REMOVED BACK TO PANELBOARD AND NEW WIRING INSTALLED AS INDICATED.
- COORDINATE WORK CONCERNING EXISTING EQUIPMENT AND SERVICES IN THE BUILDING. COORDINATE REQUIRED POWER INTERRUPTIONS AND PERFORM AT TIME CONVENIENT TO THE OWNER. INCLUDE COSTS FOR REQUIRED PREMIUM TIME.
- WIRING INDICATED TO BE RE-USED OR SERVING EQUIPMENT TO BE REPLACED AND RELOCATED SHALL BE REMOVED TO THE NEXT JUNCTION BOX UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOT ABANDON BRANCH CIRCUIT WIRING IN EXISTING WALLS AND CEILINGS. CONDUIT UNDERGROUND OR IN CONCRETE SLABS SHALL BE MADE FLUSH AND SEALED WATERTIGHT AND GASTIGHT USING O.Z. GEDNEY OR EQUAL FITTINGS.
- DISCONNECT, MAKE SAFE AND REMOVE ALL TEMPORARY AND ABANDONED WIRE WITHIN THE SPACE.
- INVENTORY ELECTRICAL ITEMS THAT ARE REMOVED AND PROVIDE A LIST TO THE OWNER FOR THEIR SELECTION OF ITEMS TO BE RETAINED. ALL ITEMS REJECTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
- ELECTRICAL CONTRACTOR SHALL COORDINATE THE SEQUENCE OF POWER INTERRUPTIONS TO THE ELECTRICAL SYSTEM WITH THE OWNER. DO NOT INTERRUPT EXISTING SERVICES WITHOUT APPROVAL. CARRY A PRICE FOR INTERRUPTIONS TO OCCUR DURING NON PEAK HOURS SUCH AS WEEKEND OR A TIME THAT WILL HAVE MINIMAL IMPACT TO THE BUILDING OPERATION.

ABBREVIATIONS

A, AMP	AMPERE(S)
AC	ALTERNATING CURRENT
AF	AMPERE FRAME (CIRCUIT BREAKER)
AFB	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFU	AMPERE FUSE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AS	AMMETER SWITCH
AM	AMMETER
AT	AMPERE TRIP (CIRCUIT BREAKER)
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BKR	BREAKER
BLDGB	BUILDING BYPASS
BP	BYPASS
BSC	BIOLOGICAL SAFETY CABINET
C	CONDUCTOR
C/CDT	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CO	COAXIAL CABLE
COAX	COAXIAL CABLE
COL	COLUMN
COMM	COMMUNICATIONS
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CFU	CENTRAL PROCESSING UNIT
CR	CARD READER
CRT	CATHODE RAY TUBE MONITOR
CS	CONTROL SWITCH
CU	COPPER
CUH	CABINET UNIT HEATER
CT	CURRENT TRANSFORMER
DEPT	DEPTH
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DEMO	DEMOLITION
DIA	DIAMETER
DN	DOWN
DISC	DISCONNECT
DIST	DISTRIBUTION
DWG	DRAWING
E	ELECTRICAL (EMERGENCY)
EC	ELECTRICAL CONTRACTOR, EMPTY CONDUIT
EF	EXHAUST FAN
EL	ELEVATION
ELECT, ELE	ELECTRICAL
ELEV	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
EO	ELECTRICALLY OPERATED
EOL	END OF LINE DEVICE
EPO	EMERGENCY POWER OFF
EQ	EQUAL
EQUIP	EQUIPMENT
ER	EXISTING TO BE RELOCATED
EW	ELECTRIC WATER COOLER
EX	EXISTING TO REMAIN
F	FLUSH
FA	FIRE ALARM
FCC	FIRE COMMAND CENTER
FCU	FAN COIL UNIT
FDDI	FIBER DISTRIBUTED DATA INTERFACE
FH	FUME HOOD
FIP	FIELD INTERFACE PANEL
FIXT	FIXTURE
FLA	FULL LOAD AMPERES
FLR, FL	FLOOR
FLUOR	FLUORESCENT
FO	FIBER OPTIC
FPB	FAN POWERED BOX
FU	FUSE
FUT	FUTURE
FVR	FULL VOLTAGE REVERSIBLE
FVNR	FULL VOLTAGE NON REVERSIBLE
G	GROUND (CONDUCTOR)
GA	GAUGE
GEN	GENERATOR
GF	GROUND FAULT
GI	GROUND FAULT CIRCUIT INTERRUPTER
GND, GRD	GROUND
GPS	GENERATOR PARALLELING SWITCHGEAR
GV	GALVANIZED RIGID STEEL CONDUIT
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC SWITCH
HSP	HOT SPOT
HT	HEIGHT
HWP	HOT WATER PUMP
HV	HIGH VOLTAGE
HZ	HERTZ
I/INST	INSTANTANEOUS
ICM	INTERCOM MASTER
ICR	INTERCOM REMOTE
IG	INTERMEDIATE GROUND
IMC	INTERMEDIATE METAL CONDUIT
INSTR	INSTRUMENT/INSTRUMENTATION
JB, JBOX	JUNCTION BOX
K	KILOAMPERES
KA	KILOAMPERES
KCM	THOUSAND CIRCULAR MILS
KEF	KITCHEN EXHAUST FAN
KW	KILOWATT
KWH	KILOWATT HOUR
KV	KILOVOLTS
KVA	KILO VOLT AMPERES
KVAR	KVA REACTIVE
L	LOCKING TYPE LOAD
LAB	LIGHTNING SURGE ARRESTER
LAN	LOCAL AREA NETWORK
LT	LONG TIME
LTG	LIGHTING
LP	LIGHTING PANEL

ABBREVIATIONS

M	METER
mm	MILLIMETER
mm2	MILLIMETERS SQUARED
MAX	MAXIMUM
MCCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MI	MINERAL-INSULATED
MIN	MINIMUM
MIC	MEDIA INTERFACE CONNECTOR
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MPS	MANUAL PULL STATION
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N	NEUTRAL/NORMAL
NEC	NATIONAL ELECTRICAL CODE
NC	NORMALLY-CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY-OPEN / NUMBER
NORM	NORMAL
NTS	NOT TO SCALE
NWP	NETWORK PROTECTOR
OCB	OIL CIRCUIT BREAKER
OL	OVERLOAD(S)
OC	OCCUPANCY SENSOR
OS	OVERLOAD
PA	PRIVATE ADDRESS SYSTEM
PB	PUSHBUTTON/PULL BOX
PBX	PRIVATE BRANCH EXCHANGE
PC	PHOTOCELL
PDU	POWER DISTRIBUTION UNIT
PF	POWER FACTOR
PFCC	POWER FACTOR CORRECTION CAPACITORS
PH/0	PHASE
PNL	PANEL
PP	POWER PANEL
PR	PRIMARY
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYLCHLORIDE
PWR	POWER
QTY	QUANTITY
RE	REMOVE EXISTING
REC, RECP	RECEPTACLE
REPO	REMOTE E.P.O.
REQ, REQD	REQUIRED
RF	RETURN FAN
RIM	READER INTERFACE MODULE
RM	ROOM
RO	REVERSE-OSMOSIS
RP	RECEPTACLE PANEL
RVAT	REDUCED VOLTAGE AUTOTRANSFORMER
RTU	REMOTE TERMINAL UNIT
RUPS	ROTARY UPS
SCA	SHORT CIRCUIT AMPERES
SD	SMOKE DETECTOR
SEC	SECONDARY
SF6	SULFUR HEXAFLORIDE
SPEC	SPECIFICATION
SPKR	SPEAKER
SS	STAINLESS STEEL/SOLID STATE
ST	SHUNT TRIP/SHORT TIME
STD	STANDARD
STP	SHIELDED TWISTED PAIR
STS	STATIC TRANSFER SWITCH
SWD	SWITCH
SWB	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
SYS	SYSTEM
T	TRANSFORMER
TB	TERMINAL BLOCK
TELECOM	TELECOMMUNICATIONS
TDR	TIME DOMAIN REFLECTOMETER
TEF	TELEPHONE EXHAUST FAN
TELE	TELEPHONE
TR	TELEPHONE ROOM
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UC	UNDER-COUNTER
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UNO	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VA	VOLT-AMPERES
VAV	VARIABLE AIR VOLUME BOX
VFD	VARIABLE FREQUENCY DRIVE
VM	VOLTMETER
VS	VOLTMETER SWITCH
W	WITH
WCR	WIRE/WATT/ WIDTH
WM	WITHSTAND CURRENT RATING
WP	WEATHERPROOF
WT	WATERTIGHT
XFMR	TRANSFORMER
XP	EXPLOSION-PROOF
ZI	ZONE INTERLOCKING
ZY	DELTA-WYE
2S2W	TWO SPEED TWO WINDING
2S2RW	TWO SPEED REVERSING TWO WINDING

COPPER WIRE AND CONDUIT SCHEDULE

(2) WIRE	(3) WIRE
SYMBOL (2) WIRE & GROUND, CONDUIT	SYMBOL (3) WIRE & GROUND, CONDUIT
2W20 2 #12 & 1 #12G, 3/4" C.	3W20 3 #12 & 1 #12G, 3/4" C.
2W30 2 #10 & 1 #10G, 3/4" C.	3W30 3 #10 & 1 #10G, 3/4" C.
2W35 2 #8 & 1 #10G, 3/4" C.	3W35 3 #8 & 1 #10G, 3/4" C.
2W40 2 #6 & 1 #10G, 3/4" C.	3W40 3 #6 & 1 #10G, 3/4" C.
2W45 2 #6 & 1 #10G, 3/4" C.	3W45 3 #6 & 1 #10G, 3/4" C.
2W50 2 #6 & 1 #10G, 3/4" C.	3W50 3 #6 & 1 #10G, 3/4" C.

RECEPTACLE SYMBOLS

	TYPICAL RECEPTACLE CIRCUIT DESIGNATION (RP-S) INDICATES PANEL DESIGNATION, (7) INDICATES CIRCUIT BREAKER NUMBER, PROVIDE 20AMP AND 2P/2 FOR EACH CIRCUIT NUMBER & 1#12G, IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED OR SCHEDULED, SEE GENERAL NOTE 1.
	U INDICATES PROVIDE (1) RECEPTACLE AND (2) USB PORTS, REFER TO ARCHITECTURAL DETAILS FOR REQUIREMENTS.
	M INDICATES RECEPTACLE WITHIN MILLWORK, REFER TO ARCHITECTURAL DETAILS FOR REQUIREMENTS.
	DUPLEX RECEPTACLE, 125V, 20A, 2P, 3W NEMA 5-20R WITH 2W20 WIRE AND (20A/1P) BREAKER U.O.N.
	DUPLEX RECEPTACLE, 125V, 20A, 2P, 3W NEMA 5-20R (GROUND FAULT CIRCUIT INTERRUPTER) WITH 2W20 WIRE AND (20A/2P) BREAKER U.O.N.
	SINGLE RECEPTACLE, 125V, 20A, 2P, 3W NEMA 5-20R WITH 2W20 WIRE AND (20A/1P) BREAKER U.O.N.
	CLOCK HANGER SINGLE RECEPTACLE, 125V, 20A, 2P, 3W NEMA 5-20R WITH 2W20 WIRE AND (20A/1P) BREAKER U.O.N.
	DOUBLE DUPLEX RECEPTACLE, 125V, 20A, 2P, 3W NEMA 5-20R WITH 2W20 WIRE AND (20A/1P) BREAKER U.O.N.
	ISOLATED GROUND DUPLEX RECEPTACLE, 125V, 20A, 2P, 3W WITH 2W20 WIRE AND (20A/1P) BREAKER U.O.N.
	SINGLE RECEPTACLE, 125V, 30A, 2P, 3W NEMA 5-30R WITH 2W20 WIRE AND (30A/1P) BREAKER U.O.N.
	SINGLE RECEPTACLE, 250V, 20A, 2P, 3W NEMA 6-20R WITH 2W20 WIRE AND (20A/2P) BREAKER U.O.N.
	SINGLE RECEPTACLE, 250V, 30A, 2P, 3W NEMA 6-30R WITH 2W20 WIRE AND (30A/2P) BREAKER U.O.N.
	SINGLE RECEPTACLE, 125/250V, 20A, 3P, 4W NEMA 14-20R WITH 3W20 WIRE AND (20A/2P) BREAKER U.O.N.
	SINGLE RECEPTACLE, 125/250V, 30A, 3P, 4W NEMA 14-30R WITH 3W20 WIRE AND (30A/2P) BREAKER U.O.N.
	SINGLE RECEPTACLE, 125/250V, 50A, 3P, 4W NEMA 14-50R WITH 3W50 WIRE AND (50A/2P) BREAKER U.O.N.
	SINGLE RECEPTACLE, 250V, 20A, 2P, 4W NEMA 15-20R WITH 3W20 WIRE AND (20A/2P) BREAKER U.O.N.
	SINGLE RECEPTACLE, 250V, 30A, 2P, 4W NEMA 15-30R WITH 3W20 WIRE AND (30A/2P) BREAKER U.O.N.
	BENCH TOP PEDIestal OUTLET, SINGLE FACE, RECEPTACLE TYPE AS INDICATED.
	BENCH TOP PEDIestal OUTLET, DOUBLE FACE, RECEPTACLE TYPE AS INDICATED.
	RAISED FLOOR POWER OUTLET MOUNTED IN RAISED FLOOR. TYPE AS INDICATED.
	OVERFLOOR RACEWAY WITH 4-GANG BOX FOR POWER, DATA AND AV WIRE/OLD OR/4 OR APPROVED EQUAL.
	CONDUITS STUB-UP FOR COMBINATION POWER/VOICE/DATA/AV OUTLET TO ACCESSIBLE CEILING AREA.

RECEPTACLE NOTES:

1. 'L' NEXT TO RECEPTACLE INDICATES LOCKING TYPE (E.G. @-NEMA LB-30R)

ELECTRICAL SYMBOLS

	JUNCTION BOX
	PANELBOARD
	DRAWOUT CIRCUIT BREAKER OVER 600V
	DRAWOUT CIRCUIT BREAKER
	DRAWOUT FUSES
	CIRCUIT BREAKER
	MOTOR CONNECTION
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	COMBINATION MAGNETIC MOTOR STARTER
	ENCLOSED CIRCUIT BREAKER
	VARIABLE FREQUENCY DRIVE
	VARIABLE FREQUENCY DRIVE WITH BYPASS
	EQUIPMENT IDENTIFICATION TAGS
	WIRE/CONDUIT EXPOSED
	WIRE/CONDUIT CONCEALED
	HOME RUN INDICATION WITH PANEL DESIGNATION (RP-S), CIRCUIT No. (7A(S)), OVERCURRENT PROTECTION "AMPS AND POLES" (20/2) AND WIRE/CONDUIT DESIGNATION (2W20). SEE WIRE AND CONDUIT SIZE SCHEDULE. PROVIDE 20AMP AND 2 #12 FOR EACH HOMERUN ARROW & 1 #12G IN 3/4" CONDUIT, UNLESS OTHERWISE INDICATED. SEE GENERAL NOTE 1.
	EMERGENCY POWER OFF

LIGHTING SYMBOLS

	TYPICAL LUMINAIRE DESIGNATION (F1) INDICATES LUMINAIRE TYPE. REFER TO LUMINAIRE SCHEDULE FOR DESCRIPTION. (RP5) INDICATES PANEL DESIGNATION, (7) INDICATES CIRCUIT BREAKER NUMBER, PROVIDE 20AMP AND 2P/2 FOR EACH CIRCUIT NUMBER & 1#12G, IN 3/4" CONDUIT, UNLESS OTHERWISE INDICATED. SEE GENERAL NOTE 1.
	FLUORESCENT LUMINAIRE
	CEILING OR WALL MOUNTED LUMINAIRE
	INDUSTRIAL TYPE FLUORESCENT LUMINAIRE
	PENDANT MOUNTED LUMINAIRE
	LUMINAIRE FOR NIGHT LIGHT OPERATION (TYPICAL)
	LUMINAIRE, POLE MOUNTED
	INDUSTRIAL TYPE FLUORESCENT LUMINAIRE POWERED BY EMERGENCY SOURCE
	WALL MOUNTED EXIT SIGN, SHADOW AREAS INDICATE NUMBER OF FACES, DIRECTION ARROWS AS INDICATED
	CEILING MTD. EXIT SIGN, SHADOW AREAS INDICATE NUMBER OF FACES, DIRECTION ARROWS AS INDICATED
	EMERGENCY BATTERY UNIT LUMINAIRE
	CONTROL COIL
	PHOTO CELL

SWITCH SYMBOLS

	SINGLE POLE SWITCH, 20A, 120-277VAC
	THREE-WAY SWITCH, 20A, 120-277VAC
	FOUR-WAY SWITCH 20A, 120-277VAC
	DIMMER CONTROL
	SINGLE POLE SWITCH WITH PILOT LIGHT
	SINGLE POLE SWITCH (KEY-OPERATED)
	LOW VOLTAGE SWITCH
	OCCUPANCY SENSOR WALL SWITCH, WATT STOPPER (INFRARED) W-200 OR APPROVED EQUAL
	OCCUPANCY SENSOR MOUNTED IN CEILING, WATT STOPPER (DUAL TECHNOLOGY) DT-300 OR APPROVED EQUAL

DEMOLITION SYMBOLS

	EXISTING LUMINAIRE OR DEVICE TO BE REMOVED
	EXISTING TO REMAIN
	REMOVE EXISTING
	EXISTING TO BE RELOCATED
	NEW LOCATION OF RELOCATED ITEM
	EXISTING ITEMS TO REMAIN INSIDE THIS AREA, UNLESS OTHERWISE INDICATED

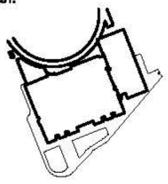
CONSULTANTS

Revision:
Date: By: Description:

CLIENT AND/OR PROJECT INFO.

CHELSEA HIGH SCHOOL
299 EVERETT AVE.
CHELSEA, MA

Key Plan:



Scale:

Jacobs Project No.: R7W71639

Drawing Title:
ELECTRICAL SPECIFICATIONS

Date: October 2015

Designed By: LE
Drawn By: LE
Checked By: SS
Drawing No.:
E-002

ELECTRICAL SPECIFICATIONS

DIVISION 26 - ELECTRICAL

SECTION 26010 - ELECTRICAL GENERAL REQUIREMENTS

- A. PROVIDE WORK AS INDICATED ON CONTRACT DOCUMENTS. PROVIDE COMPLETE AND WORKING ELECTRICAL EQUIPMENT, SYSTEMS AND COMPONENTS INCLUDING SUPPORTING SERVICES OF GENERAL, MECHANICAL AND SPECIALTY TRADES.
- B. UNLESS DIMENSIONED, WORK INDICATED ON DRAWINGS IS DIAGRAMMATIC ONLY TO INDICATE GENERAL ARRANGEMENT.
- C. PROVIDE ACCESSORIES AND APPURTENANCES REQUIRED FOR COMPLETE OPERATING SYSTEMS. INSTALLATION SHALL BE IN ACCORDANCE WITH NECA I- STANDARD PRACTICES FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING.
- D. GENERAL REQUIREMENTS IN DIVISION 1 APPLIES TO OR AFFECTS ELECTRICAL WORK. REFER TO DIVISION 23 FOR MECHANICAL ITEMS WHICH IMPACT ELECTRICAL DIVISION 26 WORK.
- E. ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE CODES, REGULATIONS AND STANDARDS. COORDINATE WORK WITH ALL OTHER TRADES AND THE DESIGN PROFESSIONAL. ANY DISCREPANCIES BETWEEN THE FIELD CONDITIONS AND/OR BETWEEN DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK.

SECTION 26020 - DEMOLITION, RELOCATION AND ALTERATION

- A. PROVIDE REMOVAL, RELOCATION, REROUTING AND RECONNECTION OF EXISTING ELECTRICAL SYSTEMS, AS REQUIRED, TO ACCOMPLISH ALTERATION, RESTORATION AND NEW WORK. PROVIDE ALL TEMPORARY EQUIPMENT AND WORK TO KEEP ALL EXISTING SYSTEMS IN OPERATION. COORDINATE WORK WITH OWNER. MINIMIZE INTERRUPTIONS OF SERVICES AND COORDINATE INTERRUPTIONS WITH OWNER.
- B. VERIFY BY INTERNATIONAL ELECTRICAL TESTING ASSOCIATION (NETA) STANDARDS THAT ALL EQUIPMENT INDICATED OR PROPOSED FOR REUSE IS IN WORKING ORDER. OWNER'S REPRESENTATIVE WILL REVIEW TEST RESULTS AND ACCEPT OR REJECT REUSE OF EQUIPMENT.
- C. DELIVER MATERIAL AND EQUIPMENT INDICATED FOR SALVAGE TO LOCATION DIRECTED BY THE OWNER'S REPRESENTATIVE. ALL OTHER DEMOLITION MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE.
- D. CAP AND SEAL ELECTRICAL OPENINGS THAT ARE NOT USED.
- E. EXISTING CONDITIONS WERE OBTAINED FROM AVAILABLE DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR CORRECT. SURVEY AND VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID AND STARTING WORK.

SECTION 26030 - SUBMITTALS

- A. PROVIDE SHOP DRAWINGS AND SUBMITTALS FOR THE REQUIRED EQUIPMENT. SUBMITTALS SHALL INCLUDE DRAWINGS, PERFORMANCE DATA AND CATALOG CUTS TO DEMONSTRATE CONFORMANCE WITH REQUIREMENTS.
 1. CONDUIT, JUNCTION BOX, PULL BOX, WIRES, AND CABLE
 2. OUTLET, WIRING DEVICES
 3. LIGHTING FIXTURES
 4. SPEAKERS
- B. EACH SHOP DRAWING SHALL BE SUBMITTED SEPARATELY UNDER THE APPLICABLE SPECIFICATION SECTION NUMBER.

SECTION 26040 - ELECTRICAL MATERIALS

- A. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BEAR THE LABEL OF UNDERWRITERS LABORATORIES, INC. (UL) OR OTHER NATIONALLY RECOGNIZED TESTING LABORATORY. ALL ELECTRICAL EQUIPMENT AND APPARATUS FOR ANY ONE (1) SYSTEM SHALL BE THE PRODUCT OF ONE (1) MANUFACTURER.

SECTION 26050 - CONDUIT

- A. CONCEAL CONDUIT AND CABLE FROM VIEW, UNLESS OTHERWISE INDICATED. MECHANICAL AND ELECTRICAL/TELECOMMUNICATION ROOMS MAY BE PROVIDED WITH EXPOSED CONDUIT.
- B. PROVIDE CONDUIT RACEWAY SYSTEM, INCLUDING CONDUITS, FITTINGS, COUPLINGS, CONNECTORS, SUPPORTS BUSHINGS AND APPURTENANCES. MINIMUM CONDUIT SIZE SHALL BE 3/4 INCHES IN DIAMETER.
- C. ALL FEEDER CONDUCTORS SHALL BE RUN IN ELECTRICAL METALLIC TUBING (EMT) WITH COMPRESSION FITTINGS.

- D. PANEL FEEDERS AND 480 VOLT MOTOR CIRCUITS SHALL BE RUN IN HEAVY-WALL RIGID ALUMINUM OR HOT-DIPPED, GALVANIZED, HEAVY-WALL RIGID STEEL CONDUIT. ALL CONDUCTORS FOR CIRCUITS 120 VOLTS AND ABOVE IN MECHANICAL AREAS SHALL BE RUN IN HEAVY-WALL RIGID ALUMINUM OR HOT-DIPPED, GALVANIZED, HEAVY-WALL RIGID STEEL CONDUIT.
- E. PROVIDE ELECTRICAL METALLIC TUBING (EMT) FOR BRANCH CIRCUITS, FIRE ALARM, SECURITY, AV, WIRING ABOVE HUNG CEILING AND IN NON-MASONRY PARTITIONS WHICH ARE NOT CLASSIFIED AS DAMP OR WET. PROVIDE COMPRESSION-TYPE FITTINGS AND INSULATED COPPER GROUND WIRE IN BRANCH CIRCUITS.
- F. FLEXIBLE METAL CONDUIT, HEAVY ZINC-COATED, SHALL BE USED FOR FINAL CONNECTIONS TO MOTORS, VIBRATING EQUIPMENT AND LIGHT FIXTURES. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE USED FOR FINAL CONNECTIONS TO MOTORS.
- G. PROVIDE EXPANSION COUPLINGS ACROSS ALL BUILDING EXPANSION JOINTS. A MAXIMUM OF (3) 90 DEGREE BENDS SHALL BE PERMITTED BETWEEN PULL BOXES.
- H. THE USE OF MC (METALLIC-CLAD) CABLE GREEN INSULATED GROUNDING CONDUCTOR SHALL BE PERMITTED FOR BRANCH CIRCUITS.
- I. ALL FIRE ALARM WIRING SHALL BE RUN IN EMT.
- J. CONDUITS SHALL BE AS MANUFACTURED BY ALIUD, REPUBLIC, TRIANGLE OR WHEATLAND. METAL CONDUIT FITTINGS SHALL BE AS MANUFACTURED BY GROUBE-HINDS, APPLETON, KILLARK, THOMAS AND BETTS, O.Z. GEDNEY OR STEEL CITY. METAL CONDUIT EXPANSION FITTINGS SHALL BE TYPE EX OR TX AS MANUFACTURED BY O.Z. GEDNEY.
- K. RUN ALL CONDUITS AND MC CABLES CONCEALED AND MINIMUM 6 INCHES CLEAR OF SOURCES OF HEAT AND 12 INCHES BETWEEN POWER CONDUITS AND COMMUNICATIONS CABLES. SUPPORT CONDUITS FROM STRUCTURE, NOT FROM CEILING SUPPORT WIRES. PROVIDE UL LISTED FIRE-RATED SMOKE AND WATER SEALANTS AT PENETRATIONS, OPENINGS AND SLEEVES IN FIRE-RATED AND ELECTRICAL/COMMUNICATION ROOM WALLS AND FLOORS.
- L. PROVIDE PULL WIRES IN ALL EMPTY CONDUIT/RACEWAY INSTALLED FOR SECURITY, TELEPHONE, DATA, AV, OR OTHER SYSTEMS.
- M. CONDUIT INSTALLATION SHALL BE IN ACCORDANCE WITH NECA 101- STANDARD FOR INSTALLING STEEL CONDUITS.

SECTION 26054 - JUNCTION AND PULL BOXES

- A. PROVIDE JUNCTION AND PULL BOXES OF SIZED PER CODE, INCLUDING COVERS, TRIM, SUPPORTS, IDENTIFICATION TAGS AND APPURTENANCES, AND CONSTRUCTED OF CODE-GAUGE GALVANIZED STEEL. BOXES MOUNTED IN CONCRETE FLOORS SHALL BE CONCRETE-TIGHT, ADJUSTABLE AND UL LISTED FOR SCRUB WATER EXCLUSION AND WITH TRIM TO MATCH FLOOR OR CONCRETE FINISH.
- B. PROVIDE A MAXIMUM OF (3) 90 DEGREE CONDUIT BENDS OR 100 FEET OF RUN LENGTH BETWEEN PULL POINTS FOR POWER CONDUITS AND (2) 90 DEGREE BENDS OR 100 FEET OF RUN LENGTH FOR COMMUNICATIONS, FASECURITY, AV, AND INSTRUMENTATION CONDUITS. LOCATE PULL BOXES IN STRAIGHT SECTIONS OF CONDUIT RUN AND DO NOT USE IN LIEU OF CONDUIT ELBOWS. PULL BOXES SHALL BE ACCESSIBLE.

SECTION 26056 - OUTLET BOXES

- A. PROVIDE ONE PIECE, PRESSED GALVANIZED STEEL 2-1/8TH INCH DEEP OUTLET BOXES WITH KNOCKOUTS. CONCEALED OUTLET BOXES SHALL BE FLUSH TO FINISHED SURFACE. EXPOSED OUTLET BOXES (EXCEPT IN MECHANICAL/ELECTRICAL/TELECOM ROOMS) SHALL BE CAST IRON WITH GASKETED COVER AND FITTINGS. OUTLETS ON OPPOSITE SIDE OF WALLS OR PARTITIONS SHALL BE STAGGERED. PROVIDED COVER TO SUIT USE.

SECTION 26058 - GROUNDING

- A. PROVIDE GROUNDING FOR TRANSFORMERS, SWITCHES, PANELBOARDS, MOTORS, CABLE TRAY, ELECTRICAL EQUIPMENT, FLOOR SYSTEMS AND FOR ALL NONCURRENT-CARRYING PORTIONS OF THE ELECTRICAL SYSTEM. CONDUCTORS SHALL BE COPPER.

SECTION 26055 - WIRES AND CABLES

- A. PROVIDE COMPLETE SYSTEM OF WIRES AND CABLES, INCLUDING TERMINALS, SPLICES, CONNECTORS, COLOR CODING, LUGS, TAPS AND APPURTENANCES.
- B. WIRES AND CABLES TO BE MINIMUM NO. 12 AWG COPPER WITH 90V-VOLT THINWALL INSULATION. WIRES 10 AWG AND SMALLER SHALL BE SOLID AND WIRES LARGER THAN NO. 10 AWG SHALL BE STRANDED. PROVIDE COLOR CODING FOR EACH WIRE OF POWER SYSTEM. FEEDERS, POWER AND LIGHTING CIRCUIT CONDUCTORS, FOR SERVICE OF 600 VOLTS AND LESS, SHALL BE COPPER, 90V VOLTS TYPE THINWALL-2 INSULATED ON WIRES UP TO AND INCLUDING NO. 8 AWG SIZES. NO. 8 AND LARGER SHALL BE TYPE THW, XHHW OR RHW INSULATION. ALUMINUM WIRE IS NOT ACCEPTABLE. APPROVED MANUFACTURERS ARE ESSEX, AMERICAN INSULATED WIRE CORPORATION, CERRO OR SOUTHWIRE.
- C. ALL BRANCH CIRCUITS SHALL BE PROVIDED WITH AN INSULATED GROUND WIRE. SHARED NEUTRALS ARE NOT PERMITTED. PROVIDE A NEUTRAL WIRE FOR EACH PHASE CONDUCTOR.
- D. USE BUCHANAN "B" CAP, IDEAL WING-NUT, THOMAS AND BETTS OR 3M SCOTCHLOK BRAND CONNECTORS FOR WIRES NO. 10 AWG AND SMALLER.
- E. USE SOLDERLESS COMPRESSION-TYPE LUGS FOR WIRES LARGER THAN NO. 10 AWG. LUGS SHALL BE BURNDY TYPE QAS QUICKLUG OR EQUAL. FEEDER TAPS SHALL BE BURNDY QPA VERSITAP OR EQUAL.
- F. MC CABLE SHALL BE COPPER, 90V VOLT, THINWALL WITH GALVANIZED STEEL ARMOR WITH A SEPARATE INSULATED GREEN GROUND CONDUCTOR. COLOR-CODE EACH CONDUCTOR. APPROVED MANUFACTURERS ARE KAF-TECH OR AFC. MC CABLE CONNECTORS SHALL BE AFC-90-75, O.Z. GEDNEY AWC OR T&B 5110.
- G. MC CABLE IS NOT ACCEPTABLE FOR USE IN:
 1. MASONRY PARTITIONS
 2. AREAS CLASSIFIED BY NFPA 70 AS DAMP OR WET
 3. POWER PANEL FEEDER CIRCUITS
 4. EXPOSED INSTALLATIONS WITHIN 10 FEET ABOVE FINISHED FLOOR
 5. ABOVE DRYWALL OR IN ACCESSIBLE CEILINGS
- H. MC CABLE INSTALLATION:
 1. DO NOT BUNDLE MORE THAN TWENTY (20) TOTAL CURRENT-CARRYING CONDUCTORS IN MULTIPLE MC CABLE RUNS ON ONE (1) MC CABLE HANGER. NEUTRALS ARE COUNTED AS CURRENT-CARRYING CONDUCTORS.
 2. INSTALL MC CABLE PARALLEL OR PERPENDICULAR TO WALLS. DIAGONAL RUNS ARE NOT ACCEPTABLE.
 3. MAINTAIN MINIMUM CLEARANCE OF 6 INCHES FROM TELECOMMUNICATIONS CONDUITS, HOT WATER AND OTHER HIGH TEMPERATURE PIPES, AND MINIMUM CLEARANCE OF 12 INCHES FROM UNSHIELDED TWISTED-PAIR TELECOMMUNICATION CABLES.
 4. MC CABLE LAYOUT AND SUPPORT ARE SUBJECT TO APPROVAL OF DESIGN PROFESSIONAL. SUPPORT MC CABLE WITH "SERIAL RINGS", INDIVIDUAL SPRING STEEL SUPPORT CLIPS, STEEL TRAPEZE HANGERS, THREADED RODS OR DEDICATED NO. 8 AWG DROP WIRES. FASTEN MC CABLE SUPPORTS TO CONCRETE SLABS, BEAMS, JOISTS OR OTHER STRUCTURAL MEMBERS OF THE BUILDING. DO NOT SUPPORT MC CABLE ON HUNG CEILING OR ON CEILING SUPPORT WIRES. DO NOT SUPPORT MC CABLE BY MEANS OF CABLE TIES.
 5. MC CABLE SUPPORT: MAXIMUM SPACING BETWEEN SUPPORTS IS 8 FEET AND WITHIN 1 FOOT OF EVERY BOX, PANELBOARD, FITTING OR CABLE TERMINATION.
 6. PROVIDE UL LISTED, FIRE-RATED PENETRATION ASSEMBLY WHERE MC CABLE PASSES THROUGH FIRE-RATED WALLS, ELECTRICAL ROOM AND TELECOMMUNICATION ROOM WALLS, FLOOR OR CEILING.

SECTION 26276 - WIRING DEVICES, OUTLETS AND PLATES

- A. PROVIDE WIRING DEVICES, OUTLETS AND PLATES, INCLUDING RECEPTACLES, SWITCHES, PILOT LIGHTS, WIRING, BUSHED OPENINGS AND APPURTENANCES.
- B. ALL DEVICES SHALL BE INDUSTRIAL EXTRA HEAVY-DUTY, SPECIFICATION GRADE, MOLDED NYLON, 20 AMPERE WITH SCREW-TYPE BACK WIRE TERMINALS OR EXTRA HEAVY-DUTY PLUG-TAIL/NAP-CONNECT DEVICES WITH 8 INCH RIGHT ANGLE PRE-STRIPPED #12 SOLID PIGTAIL AS MANUFACTURED BY ARROW-HART, BRYANT, HUBBELL, PASS & SEYMOUR (P&S) OR LEVITON. PROVIDE 6% SPARE PIGTAIL DEVICES IF USED. DEVICES IN WET OR DAMP LOCATIONS SHALL BE UL 488 WEATHER RESISTANT TYPE. REMOVAL OF DEVICE FROM BOX SHALL NOT INTERRUPT BRANCH CIRCUIT GROUND CONDUCTOR CONTINUITY.
- C. IDENTIFY ALL RECEPTACLES AND LIGHT SWITCHES BY MEANS OF A WATERPROOF, PRINTED NON-GLARE VINYL LABELING TAPE INDICATING PANEL AND CIRCUIT DESIGNATION. TAPE SHALL BE CLEAR OR TRANSLUCENT WITH BLACK TEXT.
- D. COVER PLATES SHALL MATCH EXISTING COLOR AS MANUFACTURED BY ARROW-HART OR EQUAL BY BRYANT, HUBBELL, PASS & SEYMOUR (P&S) OR LEVITON.
- E. ALL RECEPTACLES AND SWITCHES SHALL MATCH EXISTING COLOR, UNLESS OTHERWISE INDICATED.

SECTION 26510 - LIGHTING SYSTEMS

- A. PROVIDE COMPLETE OPERATIONAL ILLUMINATION SYSTEMS, WITH LUMINAIRES AS NOTED ON DRAWINGS. ALL LUMINAIRES SHALL BE UL LISTED.
- B. COORDINATE FINAL APPROVED CEILING SYSTEM WITH LUMINAIRE'S MOUNTING/TRIM OPTIONS FOR CEILING COMPATIBILITY. PROVIDE INDIVIDUAL SUPPORT FOR EACH LAY-IN FIXTURE RECESSED IN SUSPENDED CEILING. INDEPENDENT OF THE CEILING GRID WITH TWO NO. 12 GAUGE TAUT WIRE HANGERS DIRECTLY FROM THE FIXTURE TO THE BUILDING STRUCTURE ABOVE. ALSO PROVIDE UL LISTED RETAINER CLIPS TO FASTEN FIXTURE TO CEILING GRID WHERE AVAILABLE.
- C. INSTALL LUMINAIRES AT MOUNTING HEIGHTS INDICATED OR AS APPROVED IN WRITING BY DESIGN PROFESSIONAL. INSTALL LUMINAIRE PLUMB AND TRUE, AT UNIFORM HEIGHT AS INDICATED. INSTALL FIXTURES IN ACCORDANCE WITH NEC/IESNA 900 - RECOMMENDED PRACTICE FOR INSTALLING INDOOR COMMERCIAL LISTING SYSTEMS. VERIFY MOUNTING HEIGHT OF PENDANT-MOUNTED LUMINAIRES WITH OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. INSTALL ROWS OF RECESSED, SURFACE OR PENDANT-MOUNTED LUMINAIRES IN STRAIGHT LINES, UNLESS OTHERWISE INDICATED.
- D. PERFORM FINAL FOCUSING OF ADJUSTABLE LUMINAIRES IN PRESENCE OF OWNER'S REPRESENTATIVE, INCLUDING DURING TIMES OUTSIDE REGULAR WORKING HOURS. FURNISH LADDERS, SCAFFOLDING AND RIGGING, AS REQUIRED, FOR FOCUSING AND ADJUSTMENT OF LUMINAIRES.
- E. PRIOR TO OCCUPANCY, CLEAN REFLECTORS, CONES, APERTURE PLATES, LENSES, DIFFUSERS, LOUVERS, LAMPS AND DECORATIVE ELEMENTS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS. VERIFY THAT LUMINAIRES ARE CLEAN AND FREE FROM DEFECTS IN OPERATION AND APPEARANCE AT COMPLETION OF INSTALLATION AND AT DATE OF FINAL INSPECTION.

SECTION 26023 - OCCUPANCY SENSOR LIGHTING CONTROL SYSTEM

- A. PROVIDE DEVICE FOR CONTROLLING LIGHTING AT LOCATION INDICATED IN DRAWINGS. PROVIDE DEVICE WITH UNDERWRITERS LABORATORIES, INC. (UL) LISTINGS.
- B. MOTION SENSORS SHALL BE CEILING-MOUNTED, WIDE-RANGE, DUAL-TECHNOLOGY (DT) USING INFRARED AND ULTRASONIC/NOISE DETECTION SENSING WITH A MINIMUM 450 SQUARE FEET OF COVERAGE (APPROXIMATELY 12 FEET RADIUS AT 9 FEET MOUNTING HEIGHT, 360 DEGREE COVERAGE) FOR WORKING-AT-DESK TOP TYPE MOTION. PROVIDE SENSOR WITH SPOT LOW VOLTAGE ISOLATED CONTACT FOR INTERFACE WITH BMS. PROVIDE ASSOCIATED CIRCUIT CONTROLLER TO INTERFACE WITH OCCUPANCY SENSOR.
- C. INSTALL DEVICE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND NFPA 70. PROVIDE SERVICES OF MANUFACTURER'S REPRESENTATIVE TO CHECK INSTALLATION AND TEST OPERATION OF LIGHTING CONTROL DEVICE. CONDUCT A SYSTEM POINT-BY-POINT WALK-THROUGH. EXPLAIN OPERATION OF CONTROL TO OWNER AND WALK-THROUGH THEIR OPERATION.
- D. IN THE EVENT OF SENSOR FAILURE, A BYPASS MANUAL "OVERRIDE ON" SHALL BE PROVIDED ON EACH SENSOR. WHEN BYPASS IS UTILIZED, LIGHTING SHALL REMAIN ON CONSTANTLY OR CONTROL SHALL DIVERT TO A WALL SWITCH UNTIL SENSOR IS REPLACED. THIS CONTROL SHALL BE RECESSED TO PREVENT TAMPERING.
- E. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURER OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
 1. STEINEL PROFESSIONAL
 2. DOUGLAS SENSOR
 3. HUBBELL BUILDING AUTOMATION INC.
 4. CRESTRON
 5. LEVITON MANUFACTURING CO. INC
 6. WATT STOPPER

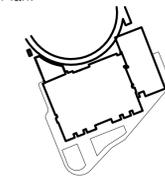
CONSULTANTS

Revision:
Date: By: Description:

CLIENT AND/OR PROJECT INFO.

CHELSEA HIGH SCHOOL
299 EVERETT AVE.
CHELSEA, MA

Key Plan:



Scale:

Jacobs Project No.: R7W71639

Drawing Title:

**ELECTRICAL DEMOLITION
LIGHTING PLANS
PARTIAL LEVEL 1 & 2**

Date: October 2015

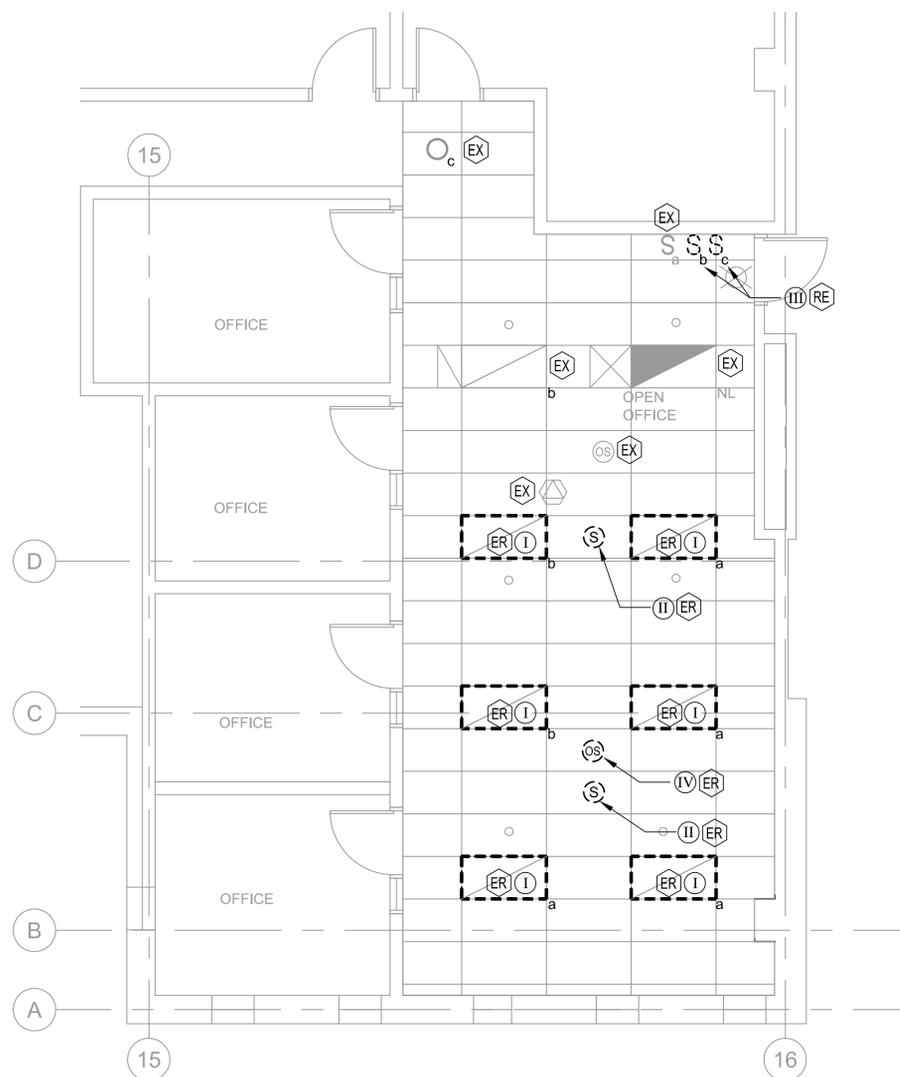
Designed By: LE

Drawing No.:

Drawn By: LE

Checked By: S.S.

ED-101



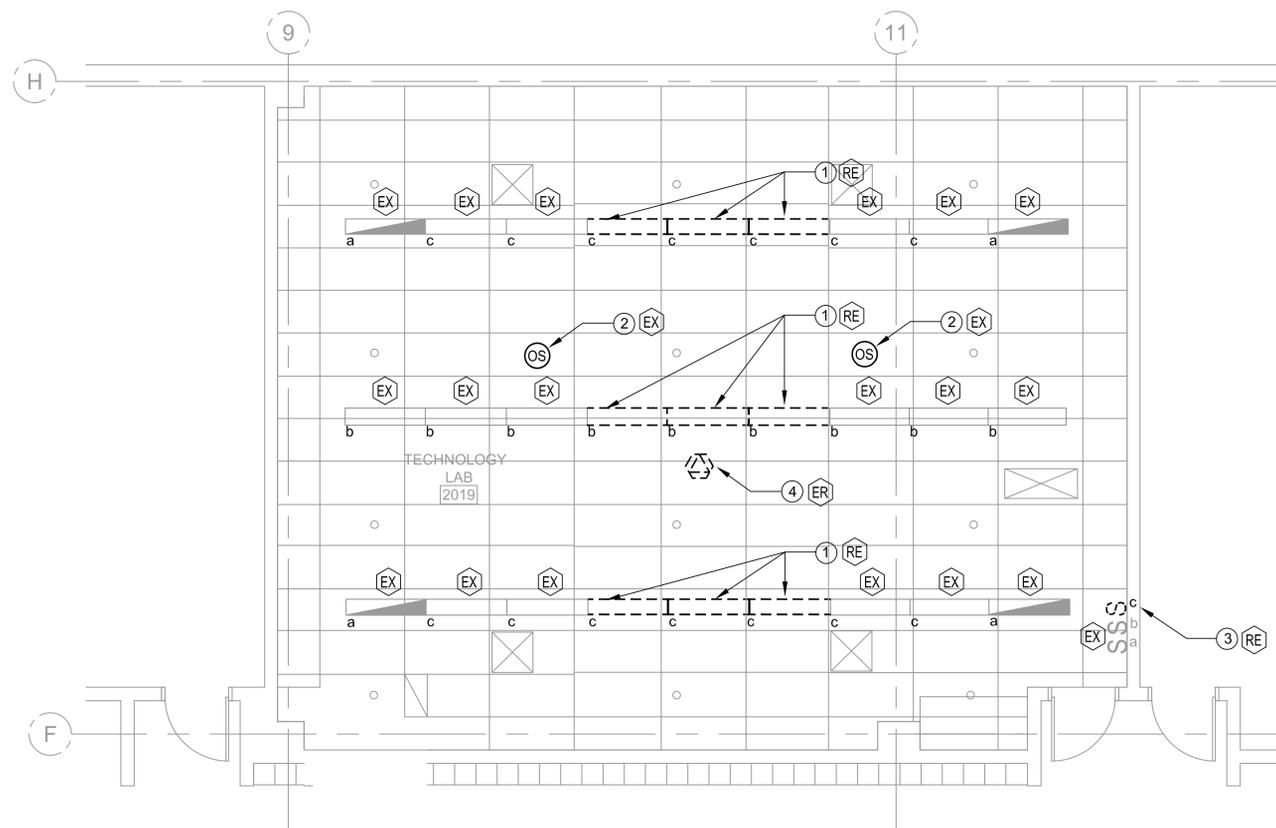
1 ELECTRICAL OFFICE DEMOLITION LIGHTING PLAN
PARTIAL LEVEL 1
ED-101 SCALE: 1/4" = 1'-0"

NOTES:

- REFER TO E-001 FOR GENERAL NOTES AND OTHER REQUIREMENTS.
- UNLESS OTHERWISE NOTED, ALL EXISTING DEVICES AND ASSOCIATED CIRCUITS TO REMAIN. EXISTING TO REMAIN DEVICE SHOWN IN SOLID GRAY.
- EC SHALL FIELD VERIFY FOR EXACT PANELBOARD LOCATIONS.

OFFICE DEMOLITION PLAN KEY NOTES:

- EXISTING LIGHTING FIXTURES SHALL BE RELOCATED. EXISTING LIGHTING BRANCH CIRCUIT (DPE-3 VIA LCP1E1) SERVING DEMOLISHED LIGHT FIXTURES SHALL BE PULLED BACK TO NEAREST LIVE JUNCTION BOX. REFER TO NEW LIGHTING PLAN FOR NEW LOCATION AND OTHER REQUIREMENTS.
- EXISTING SPEAKERS SHALL BE RELOCATED. REFER TO NEW LIGHTING PLAN FOR NEW SPEAKER LOCATION. EXTEND WIRE AS REQUIRED.
- REMOVE EXISTING LIGHTING SWITCH ZONE B AND C. EXISTING LIGHTING FIXTURES TIED TO DEMOLISHED LIGHTING SWITCHES SHALL BE REWIRED. REFER TO NEW LIGHTING PLAN FOR NEW LIGHTING CONTROL REQUIREMENTS.
- EXISTING OCCUPANCY SENSOR SHALL BE RELOCATED AND REWIRED. REFER TO NEW LIGHTING PLAN FOR NEW LIGHTING CONTROL REQUIREMENTS.



2 ELECTRICAL CLASSROOM DEMOLITION LIGHTING PLAN
PARTIAL LEVEL 2
ED-101 SCALE: 1/4" = 1'-0"

CLASSROOM DEMOLITION PLAN KEY NOTES:

- EXISTING LIGHTING FIXTURES SHALL BE REMOVED. EXISTING LIGHTING BRANCH CIRCUIT (LPW21-5 VIA LIGHTING CONTROL PANEL LCP2W) SERVING DEMOLISHED LIGHT FIXTURES SHALL BE PULLED BACK TO NEAREST LIVE JUNCTION BOX. REFER TO NEW LIGHTING PLAN FOR NEW LIGHTING CONTROL REQUIREMENTS.
- EXISTING OCCUPANCY SENSOR SHALL BE REWIRED. REFER TO NEW LIGHTING PLAN FOR NEW LIGHTING CONTROL REQUIREMENTS.
- REMOVE EXISTING LIGHT SWITCH ZONE C. EXISTING LIGHTING FIXTURES TIED TO DEMOLISHED LIGHT SWITCH SHALL BE REWIRED. REFER TO NEW LIGHTING PLAN FOR NEW LIGHTING CONTROL REQUIREMENTS.
- EXISTING CEILING MOUNTED WIFI DEVICE SHALL BE RELOCATED. EXTEND WIRING AS REQUIRED.

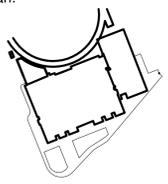
CONSULTANTS

Revision:
Date: By: Description:

CLIENT AND/OR PROJECT INFO.

CHELSEA HIGH SCHOOL
299 EVERETT AVE.
CHELSEA, MA

Key Plan:



Scale:

Jacobs Project No.: R7W71639

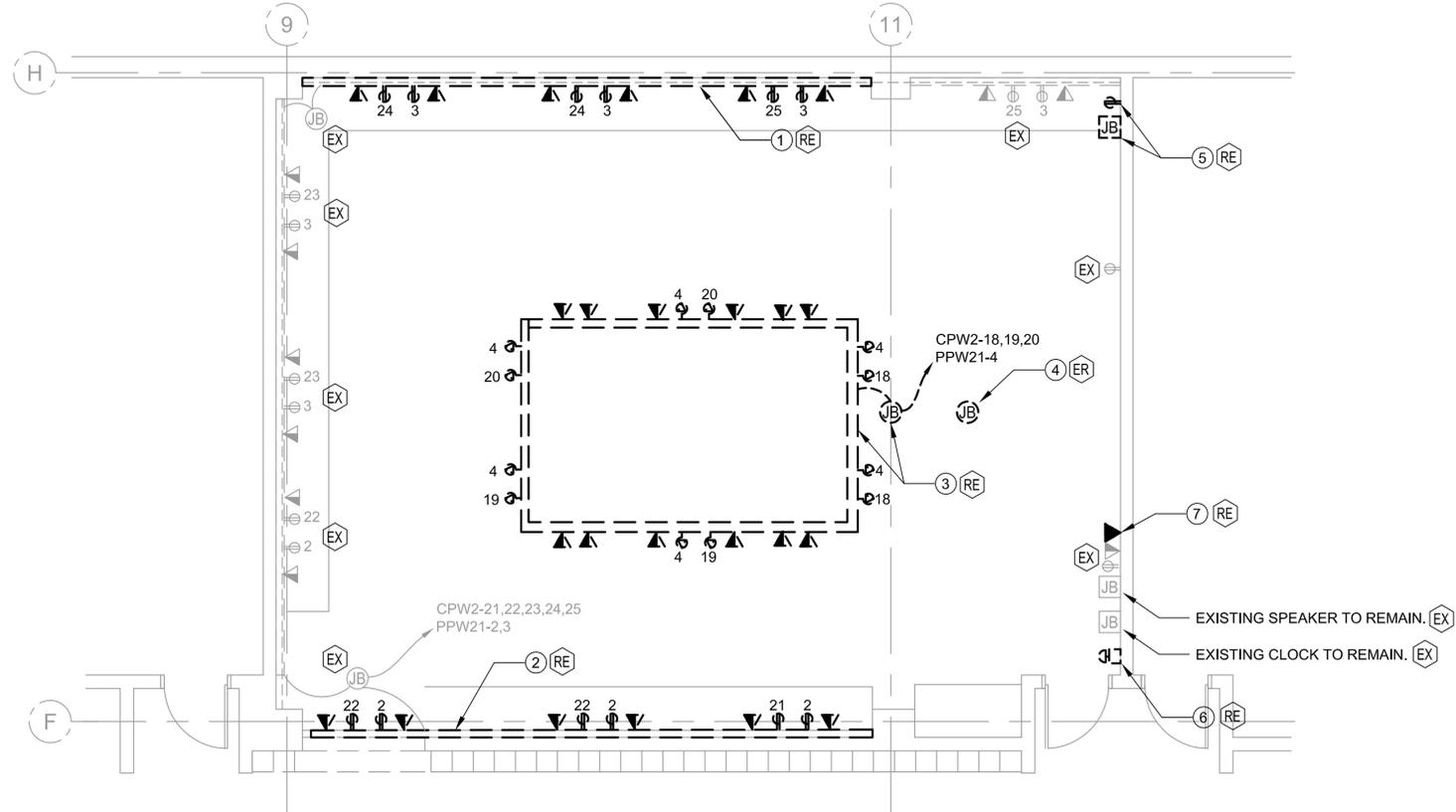
Drawing Title:

**ELECTRICAL DEMOLITION POWER PLAN
PARTIAL LEVEL 2**

Date: October 2015

Designed By: LE
Drawn By: LE
Checked By: SS

Drawing No.: **ED-201**



1 ELECTRICAL DEMOLITION POWER PLAN - PARTIAL LEVEL 2
ED-201 SCALE: 1/4" = 1'-0"

NOTES:

1. REFER TO E-001 FOR GENERAL, DEMOLITION NOTES AND OTHER REQUIREMENTS.
2. UNLESS OTHERWISE NOTED, ALL EXISTING DEVICES AND ASSOCIATED CIRCUITS TO REMAIN. EXISTING TO REMAIN DEVICE SHOWN IN SOLID GRAY.
3. EC SHALL FIELD VERIFY FOR EXACT PANELBOARD LOCATIONS.

KEY NOTES:

- ① DISCONNECT AND SAFELY REMOVE EXISTING SURFACE RACEWAY. PULL WIRES BACK TO NEXT LIVE JUNCTION BOX. MAINTAIN BRANCH CIRCUIT AND CONDUIT FOR NEW RACEWAY (CPW2-24,25 AND PPW21-3). REFER TO SHEET E-201 FOR NEW RACEWAY AND OTHER REQUIREMENTS.
- ② DISCONNECT AND SAFELY REMOVE EXISTING SURFACE RACEWAY. PULL WIRES BACK TO NEXT LIVE JUNCTION BOX. MAINTAIN BRANCH CIRCUIT AND CONDUIT FOR NEW RACEWAY (CPW2-22,21 AND PPW21-2). REFER TO SHEET E-201 FOR NEW RACEWAY AND OTHER REQUIREMENTS.
- ③ DISCONNECT AND SAFELY REMOVE EXISTING CEILING MOUNTED RACEWAY. PULL WIRES BACK TO SOURCES IN THEIR ENTIRETY (CPW2-18,19,20 AND PPW21-4). EXISTING CIRCUIT BREAKERS SHALL BE MADE SPARE.
- ④ EXISTING PROJECTOR SHALL BE RELOCATED. EXTEND POWER AND DATA WIRES AS REQUIRED.
- ⑤ EXISTING WALL AV JUNCTION BOX AND DUPLEX RECEPTACLE SHALL BE REMOVED. PULL WIRES BACK TO SOURCE IN THEIR ENTIRETY.
- ⑥ DISCONNECT AND SAFELY REMOVE EXISTING EPO BUTTON AND DEACTIVATE SIGNAL. UNLESS OTHERWISE NOTED, MAINTAIN EXISTING EPO SYSTEM.
- ⑦ REMOVE EXISTING TELEPHONE OUTLET. PULL WIRES BACK TO SOURCE.

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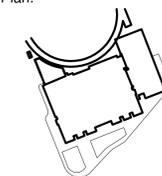
CONSULTANTS

Revision:
Date: By: Description:

CLIENT AND/OR PROJECT INFO.

CHELSEA HIGH SCHOOL
299 EVERETT AVE.
CHELSEA, MA

Key Plan:



Scale:

Jacobs Project No.: R7W71639

Drawing Title:

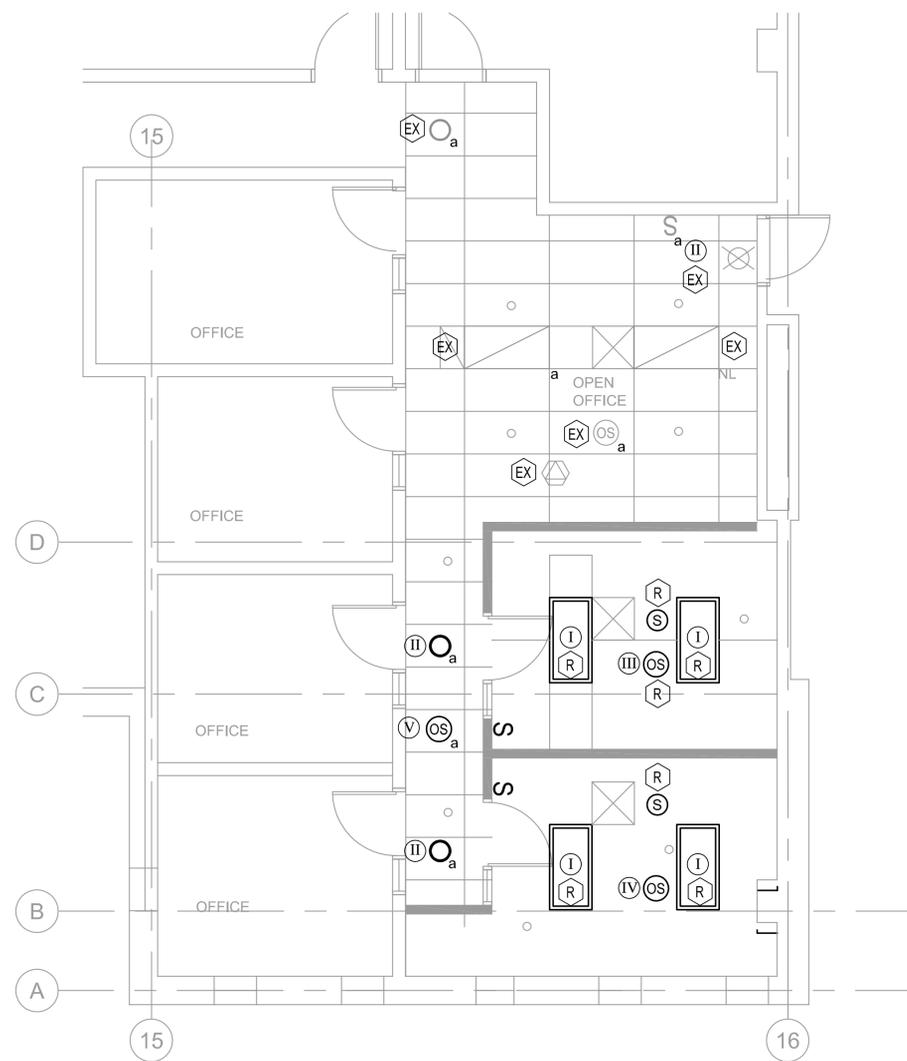
**ELECTRICAL DEMOLITION
LIGHTING PLANS
PARTIAL LEVEL 1 & 2**

Date: October 2015

Designed By: LE Drawn By: LE Checked By: SS

Drawing No.:

E-101



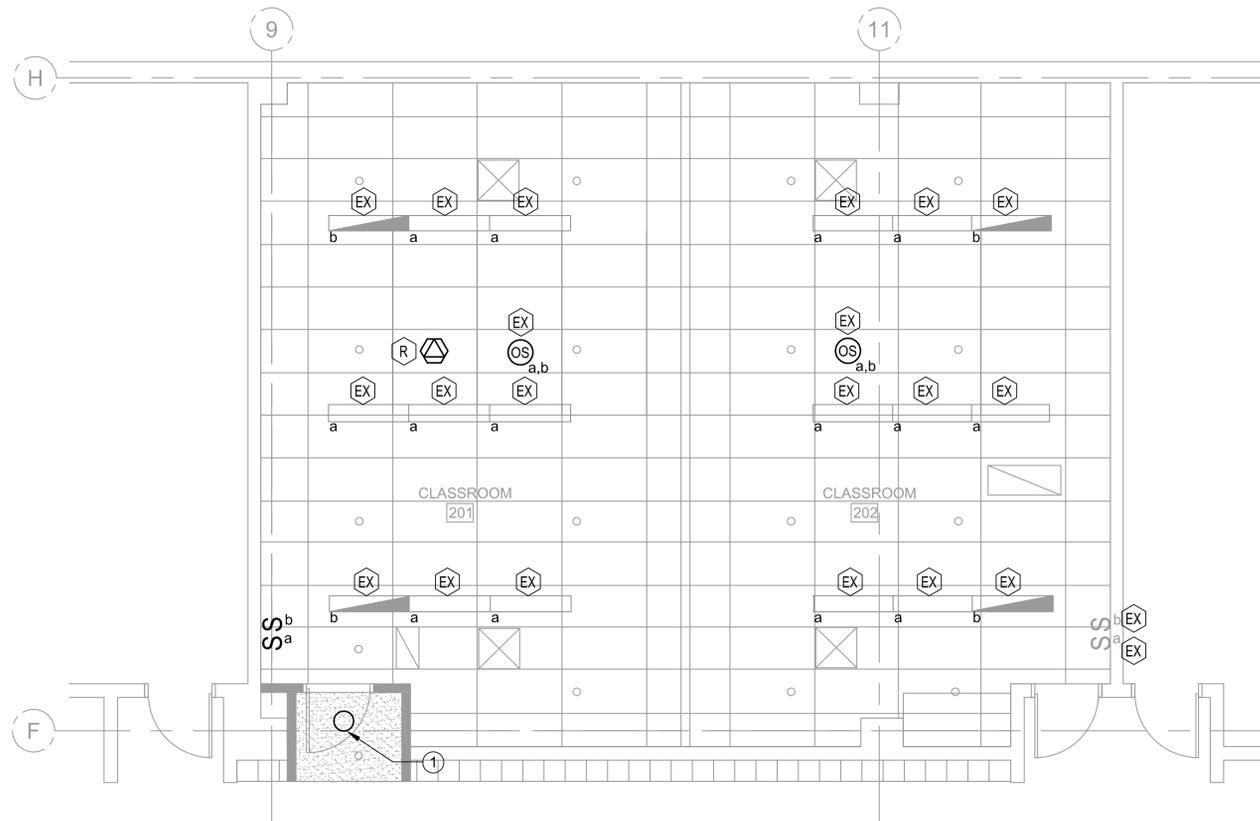
1 ELECTRICAL OFFICE LIGHTING PLAN
PARTIAL LEVEL 1
E-101 SCALE: 1/4" = 1'-0"

NOTES:

1. REFER TO E-001 FOR GENERAL NOTES AND OTHER REQUIREMENTS.
2. UNLESS OTHERWISE NOTED, ALL EXISTING DEVICES AND ASSOCIATED CIRCUITS TO REMAIN. EXISTING TO REMAIN DEVICE SHOWN IN SOLID GRAY.
3. EC SHALL FIELD VERIFY FOR EXACT PANELBOARD LOCATIONS.
4. EXISTING/NEW LIGHTING FIXTURES SHALL BE REWIRED AND CONTROLLED AS SHOWN ON PLANS.
5. ALL NEW DEVICES SHALL MATCH OWNER STANDARDS.

OFFICE PLAN KEY NOTES:

- ① RELOCATED LIGHTING FIXTURES SHALL BE TIED-IN TO EXISTING NORMAL LIGHTING BRANCH CIRCUIT WITHIN THE ROOM AND CONTROL BY LOCAL SWITCH AS SHOWN.
- ② PROVIDE NEW DOWNLIGHTS TO MATCH EXISTING. LIGHTING FIXTURE SHALL BE TIED-IN TO EXISTING LIGHTING BRANCH CIRCUIT WITHIN THE ROOM AND CONTROL BY EXISTING LIGHT SWITCH IN THE OPEN OFFICE.
- ③ RELOCATED OCCUPANCY SENSOR SHALL BE CONNECTED TO RELOCATED LIGHTING FIXTURES WITHIN THE ROOM. EXTEND WIRE AS REQUIRED.
- ④ PROVIDE NEW OCCUPANCY SENSOR AND TIE-IN TO RELOCATED LIGHT FIXTURES WITHIN THE ROOM.
- ⑤ PROVIDE NEW OCCUPANCY SENSOR AND TIE-IN TO LIGHT FIXTURES TO LIGHTING FIXTURES IN THE OPEN OFFICE ROOM.



2 ELECTRICAL CLASSROOM LIGHTING PLAN
PARTIAL LEVEL 2
E-101 SCALE: 1/4" = 1'-0"

CLASSROOM PLAN KEY NOTES:

- ① PROVIDE NEW DOWNLIGHTS TO MATCH EXISTING. LIGHTING FIXTURE SHALL BE TIED-IN TO EXISTING LIGHTING BRANCH CIRCUIT (LPE21-9 VIA LCP2E1) SERVING LIGHT FIXTURES IN THE CORRIDOR.

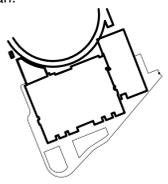
CONSULTANTS

Revision:
Date: By: Description:

CLIENT AND/OR PROJECT INFO.

CHELSEA HIGH SCHOOL
299 EVERETT AVE.
CHELSEA, MA

Key Plan:



Scale:

Jacobs Project No.: R7W71639

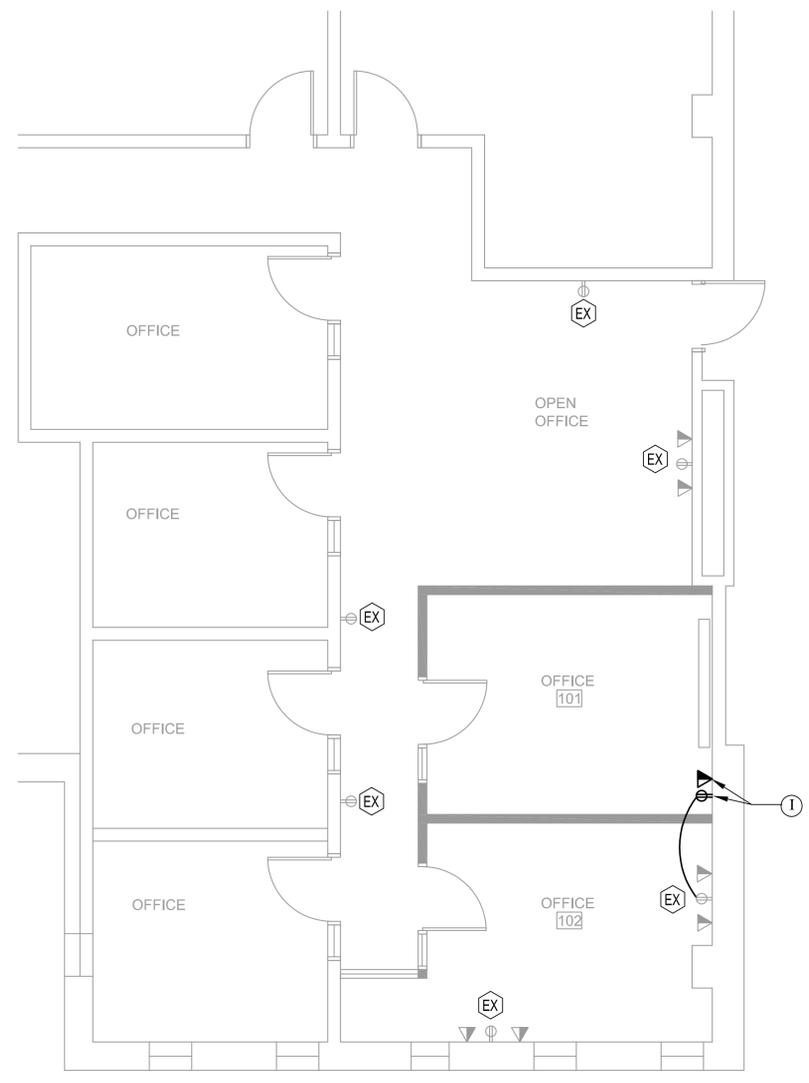
Drawing Title:

**ELECTRICAL
POWER PLANS
PARTIAL LEVEL 1 & 2**

Date: October 2015

Designed By: LE
Drawn By: LE
Checked By: SS

Drawing No.:
E-201



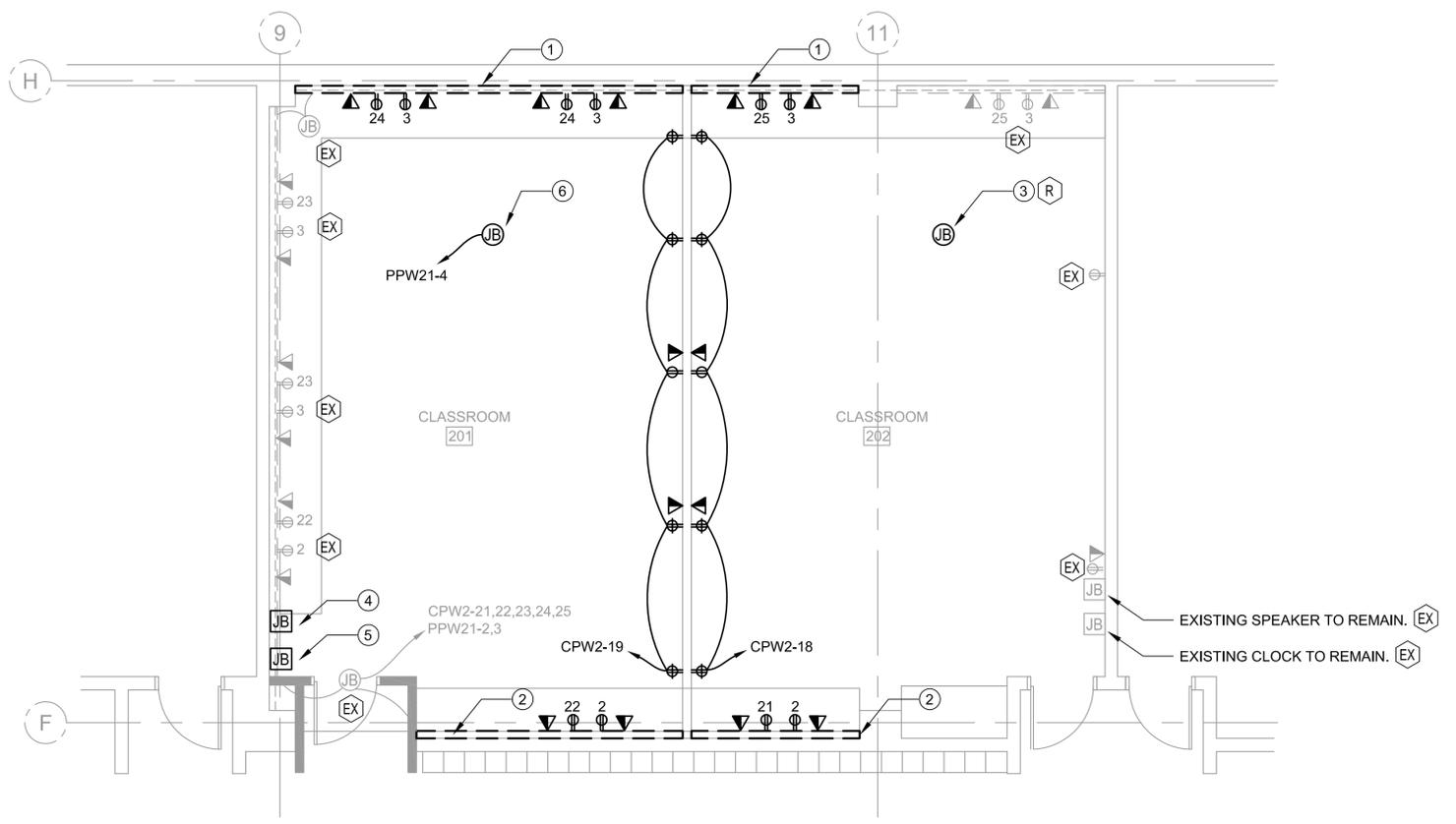
1 ELECTRICAL OFFICE POWER PLAN - PARTIAL LEVEL 1
E-201 SCALE: 1/4" = 1'-0"

NOTES:

1. REFER TO E-001 FOR GENERAL NOTES AND OTHER REQUIREMENTS.
2. UNLESS OTHERWISE NOTED, ALL EXISTING DEVICES AND ASSOCIATED CIRCUITS TO REMAIN. EXISTING TO REMAIN DEVICE SHOWN IN SOLID GRAY.
3. ALL NEW DEVICES SHALL MATCH OWNER STANDARDS.
4. EC SHALL FIELD VERIFY FOR EXACT PANELBOARD LOCATIONS.

OFFICE POWER PLAN KEY NOTES:

- ① PROVIDE NEW DUPLEX RECEPTACLE AND 2 DROPS DATA OUTLET. NEW DUPLEX RECEPTACLE SHALL BE TIED-IN TO EXISTING RECEPTACLE BRANCH CIRCUIT IN THE OFFICE 102. EC SHALL FIELD VERIFY EXISTING BRANCH CIRCUIT CONDITIONS AND CONTINGENCIES PRIOR TO CONNECT TO NEW LOAD. PROVIDE NEW DATA CABLES AS REQUIRED.



2 ELECTRICAL CLASSROOMS POWER PLAN - PARTIAL LEVEL 2
E-201 SCALE: 1/4" = 1'-0"

CLASSROOM POWER PLAN KEY NOTES:

- ① PROVIDE NEW SURFACE RACEWAY TO MATCH EXISTING. REUSE EXISTING BRANCH CIRCUITS (CPW2-24,25 AND PPW21-3). EXTEND BRANCH CIRCUIT AND PROVIDE DATA CABLE AS REQUIRED.
- ② PROVIDE NEW SURFACE RACEWAY TO MATCH EXISTING. REUSE EXISTING BRANCH CIRCUITS (CPW2-22,21 AND PPW21-2). EXTEND BRANCH CIRCUIT AND PROVIDE DATA CABLE AS REQUIRED.
- ③ PROVIDE PROVIDE NEW VIDEO/DATA/DUPLEX RECEPTACLE JUNCTION BOX FOR RELOCATED CEILING MOUNTED PROJECTOR. EXTEND POWER AND DATA CABLE AS REQUIRED.
- ④ PROVIDE NEW JUNCTION BOX FOR NEW SPEAKER. SPEAKER SHALL MATCH EXISTING IN CLASSROOM 202 AND TIED-IN TO EXISTING SOUND SYSTEM. COORDINATE EXACT SOUND SYSTEM LOCATION WITH ARCHITECT.
- ⑤ PROVIDE NEW JUNCTION BOX FOR NEW CLOCK (PROVIDE BY OTHERS), PROVIDE WIRE AS REQUIRED. COORDINATE EXACT LOCATION WITH ARCHITECT.
- ⑥ PROVIDE NEW VIDEO/DATA/DUPLEX RECEPTACLE JUNCTION BOX FOR CEILING MOUNTED PROJECTOR.

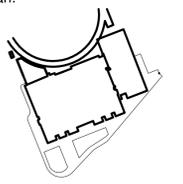
CONSULTANTS

Revision:
 Date: By: Description:

CLIENT AND/OR PROJECT INFO.

CHELSEA HIGH SCHOOL
299 EVERETT AVE.
CHELSEA, MA

Key Plan:



Scale:

Jacobs Project No.: R7W71639

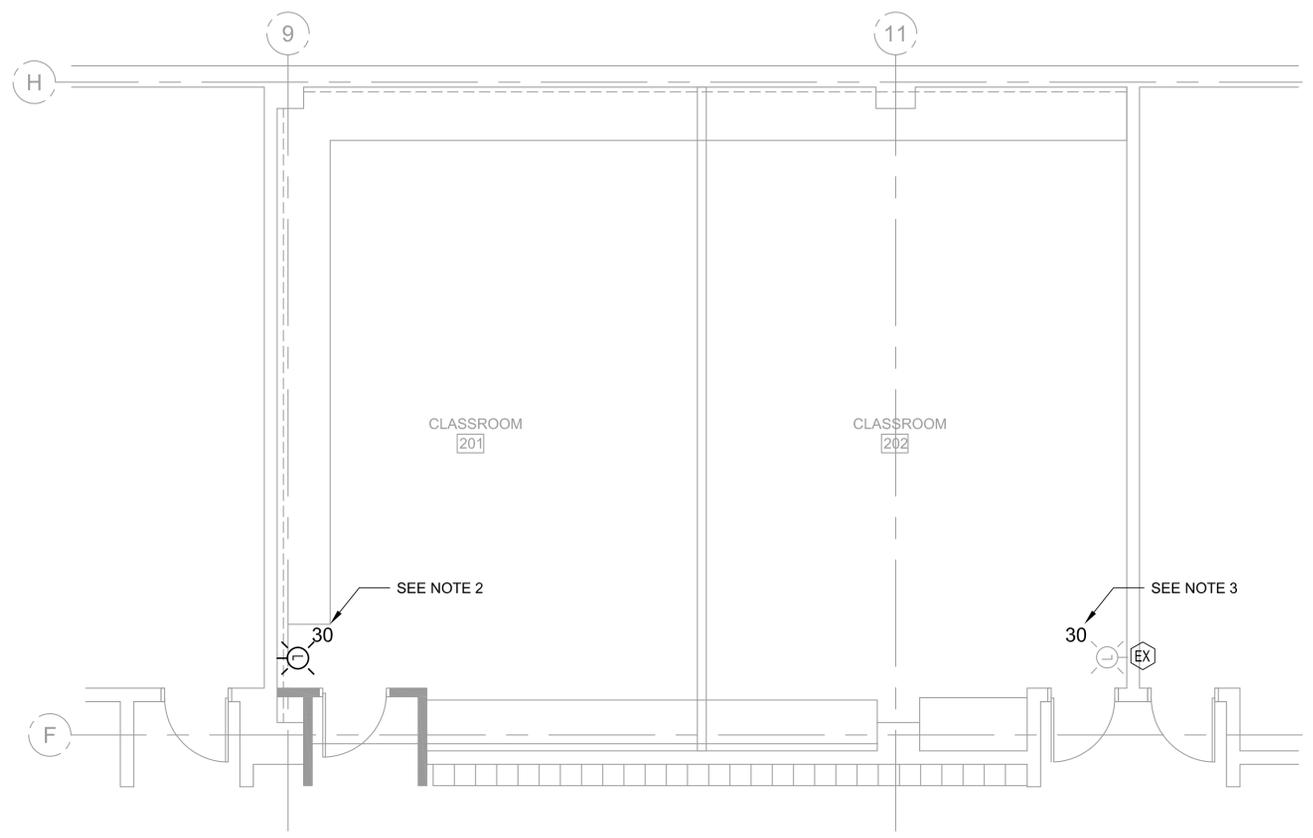
Drawing Title:

**FIRE ALARM PLAN
 PARTIAL LEVEL 2**

Date: October 2015

Designed By: LE
 Drawn By: LE
 Checked By: SS

Drawing No.: **FS-101**



1 FIRE ALARM PLAN - PARTIAL LEVEL 2
 FS-101 SCALE: 1/4" = 1'-0"

FIRE ALARM SPECIFICATIONS:

SECTION 267250 - FIRE ALARM SYSTEM

- A. PROVIDE A COMPLETE FIRE ALARM SYSTEM EXTENSION IN ACCORDANCE WITH NFPA 72 AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL CODES AND STANDARDS. SUBMIT COMPLETE POINT-TO-POINT WIRING DIAGRAMS AS PART OF THE FIRE ALARM SYSTEM SHOP DRAWINGS.
- B. FIRE ALARM SYSTEM SHALL BE MANUFACTURED BY EXISTING BUILDING FIRE ALARM COMPANY SYSTEM. CONNECT TO EXISTING BUILDING FIRE ALARM SYSTEM. EXISTING DEVICES MAY BE REUSED IF THEY ARE OPERATIONAL. COORDINATE WITH FIRE ALARM SYSTEM MANUFACTURER.
- C. PROVIDE FINAL TESTING OF FIRE ALARM SYSTEM IN THE PRESENCE OF OWNER'S REPRESENTATIVE. GUARANTEE COMPLETE FIRE ALARM SYSTEM EXTENSION FOR A PERIOD OF ONE YEAR FOLLOWING FINAL ACCEPTANCE BY OWNER.

NOTES:

- 1. REFER TO E-001 FOR GENERAL NOTES, SYMBOLS AND OTHER REQUIREMENTS.
- 2. PROVIDE NEW FIRE ALARM SPEAKER STROBE WITH CANDELA RATING AS SHOWN. PROVIDE NEW FIRE ALARM WIRING. NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM. COORDINATE DEVICE TESTING AND PROGRAMMING WITH FIRE ALARM SERVICE COMPANY ON RECORD.
- 3. THE CONTRACTOR SHALL REPLACE/ADJUST EXISTING FIRE ALARM DEVICE WITH CANDELA RATING AS SHOWN. DO NOT REUSE EXISTING ADA STROBES WHICH DO NOT HAVE ADJUSTABLE SETTINGS UNLESS THE EXISTING ADA COMPLIANT STROBE FITS THE REQUIRED CANDELA RATING FOR THE NEW AREA BEING SERVED.
- 4. NEW STROBES SHALL HAVE ADJUSTABLE CANDELA RATINGS BETWEEN 15 AND 110.

FIRE ALARM SYMBOLS	
	- WALL MOUNTED VISUAL INDICATOR ONLY
	XX - TEXT FIELD FOR CANDELA RATING

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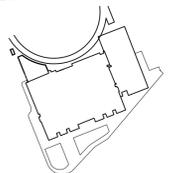
CONSULTANTS

Revision:
Date: By: Description:

CLIENT AND/OR PROJECT INFO.

CHELSEA HIGH SCHOOL
299 EVERETT AVE.
CHELSEA, MA

Key Plan:



Scale:

Jacobs Project No.: R7W1639

Drawing Title:

MECHANICAL
NOTES, SYMBOLS
AND ABBREVIATIONS

Date: October 2015

Designed By: G.B. Drawing No.:

Drawn By: C.B.

Checked By: M-O

REGISTER, GRILLE & DIFFUSER SCHEDULE									
UNIT MARK	CFM RANGE	MAX #	MAX PC	TYPE	SIZE	REMARKS			
100-150	#15	.023	23	CEILING	24x24	BASED ON TITUS MODEL TMS			
300-450	#12	.031	21	CEILING	24x24	BASED ON TITUS MODEL TMS			
200-300	#8	.014	21	CEILING	24x24	BASED ON TITUS MODEL TMS			
100-150	#6	.051	16	CEILING	24x24	BASED ON TITUS MODEL TMS			
200	-	.044	28	EXPOSED DUCT INTD	4"-Ø 2 SLOTS	BASED ON TITUS MODEL M-38			
250-350	-	.022	21	CEILING	4"-Ø 3 SLOTS	BASED ON TITUS MODEL M-39			
350	-	.022	21	SIDE WALL	6"-Ø 3 SLOTS	BASED ON TITUS MODEL M-39			
250-350	-	.021	18	CEILING	6"-Ø 3 SLOTS	BASED ON TITUS MODEL M-39			
500-600	-	.023	22	SIDE WALL	48x6	BASED ON TITUS MODEL CT-481			
200	-	.024	21	CEILING	4"-Ø 3 SLOTS	BASED ON TITUS MODEL M-38			
500-600	#14	.023	20	CEILING	24x24	BASED ON TITUS MODEL TMS			
300	-	.058	21	EXPOSED DUCT INTD	5"-Ø 3 SLOTS	BASED ON TITUS MODEL M-38			
800-850	#15	0.06	24	CEILING	24x24	BASED ON TITUS MODEL TMS			
700-730	-	0.06	24	SIDE WALL	48x6	BASED ON TITUS MODEL CT-480			
700-730	-	0.06	24	SIDE WALL	48x6	BASED ON TITUS MODEL CT-481			
800	-	0.06	24	CEILING	80"x48"	BASED ON TITUS MODEL CT-480			
100-200	-	.149	25	SIDE WALL	8x8	BASED ON TITUS MODEL 300RL			
800-850	-	0.11	25	SIDE WALL	18x12	BASED ON TITUS MODEL 300RL			
600	-	.149	26	SIDE WALL	12x12	BASED ON TITUS MODEL 300RL			
275	-	.149	22	SIDE WALL	12x6	BASED ON TITUS MODEL 300RL			
1500-1700	-	.031	23	SIDE WALL	48x10	BASED ON TITUS MODEL 350FL			
2000-2400	-	.089	24	CEILING	24x24	BASED ON TITUS MODEL 350FL			
100-200	-	.169	19	CEILING	6x6	BASED ON TITUS MODEL 350FL			
220-300	-	.089	18	CEILING	8x8	BASED ON TITUS MODEL 350FL			
800-850	-	.169	21	CEILING	24x10	BASED ON TITUS MODEL 350FL			
400-550	-	.14	19	CEILING	12x12	BASED ON TITUS MODEL 350FL			
350-550	-	.14	19	CEILING	24x4	BASED ON TITUS MODEL 350FL			
800-800	-	0.1	19	CEILING	18x18	BASED ON TITUS MODEL 350FL			
1750	-	0.088	22	SIDE WALL	36x14	BASED ON TITUS MODEL 33R			
825	-	0.13	24	SIDE WALL	14x14	BASED ON TITUS MODEL 350FL			
200	-	.169	18	SIDE WALL	6x6	BASED ON TITUS MODEL 350FL			
1200	-	.059	20	CEILING	24x24	BASED ON TITUS MODEL 350FL			
1500	-	.059	22	CEILING	48x12	BASED ON TITUS MODEL 350FL			
2500-3000	-	.031	23	CEILING	48x18	BASED ON TITUS MODEL 350FL			
1200-1500	-	.094	22	CEILING	20x20	BASED ON TITUS MODEL 350FL			
300-400	-	.021	21	CEILING	24x4	BASED ON TITUS MODEL 350FL			
200-300	-	.045	25	CEILING	2"-Ø 4 SLOTS	BASED ON TITUS MODEL M-R-39			
100-150	-	.045	24	CEILING	3"-Ø 4 SLOTS	BASED ON TITUS MODEL M-R-39			
75-150	-	.14	18	CEILING	6x6	BASED ON TITUS MODEL 450FL			
75-150	-	.14	18	SIDE WALL	6x6	BASED ON TITUS MODEL 350FL			
400-500	-	.021	21	CEILING	12x12	BASED ON TITUS MODEL 350FL			
300	-	.14	19	CEILING	10x10	BASED ON TITUS MODEL 350FL			
800	-	.13	22	CEILING	14x14	BASED ON TITUS MODEL 350FL			
2200	-	.067	21	SIDE WALL	30x24	BASED ON TITUS MODEL 350FL			
200-300	-	.02	18	SIDE WALL	10x8	BASED ON TITUS MODEL 350FL			
75-150	-	.045	12	SIDE WALL	18x4	BASED ON TITUS MODEL 350FL			
750	-	.049	12	SIDE WALL	32x10	BASED ON TITUS MODEL 350FL			
4000	-	.31	32	CEILING	22x22	BASED ON TITUS MODEL 50F			

AIR HANDLING UNIT SCHEDULE																									
UNIT MARK	SERVICE/LOCATION	TOTAL BENS. (MESH)	LAT. (IN)	LAT. (IN)	COOLING COIL - 200 GLYCOL			HOT WATER COIL			SUPPLY FAN			REMARKS											
					WATER FLOW (GPM)	WATER P.D. (FT.)	MIN. BENS.	MAX. FACE VEL. (FPM)	MIN. RPM	MAX. AIR W.P. (PSI)	CFM	TSP	RPM		HP	W. O.A.									
100-150	AUDITORIUM/1ST FLOOR	231.1	178	80/68	55	0.91	31	40.5	3.4	6	550	93	6.2	59	72	820	0.28	0.1	8600	4	1109	10.0	20	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	LOBBY/PENTHOUSE	231.1	178	80/68	55	0.91	31	40.5	3.4	6	550	93	6.2	59	72	820	0.28	0.1	8600	4	1110	7.5	20	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	DINING/PENTHOUSE	231.1	178	80/68	55	0.91	31	40.5	3.4	6	550	93	6.2	59	72	820	0.28	0.1	8600	4	1110	7.5	20	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	1ST FL. EA/PENTHOUSE	264.6	196	81/67	55	1.10	35.3	40.5	5.1	8	550	144	9.6	53	72	660	0.32	0.2	7000	4.5	1157	7.5	30	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	COM. CENT./1ST FLOOR	257.2	194	81/67	55	1.00	35	40.5	4.6	8	550	140	9.3	53	72	647	0.30	0.3	6800	4.5	1157	7.5	30	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	COM. CENT./PENTHOUSE	189.1	140	81/67	55	1.07	25.2	40.5	7.2	6	550	103	6.9	53	72	562	0.23	0.2	5000	4	1327	5	30	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	LIBRARY/3RD FLOOR	311.2	223	82/68	55	1.03	41.5	40.5	6.4	6	550	225	15	45	72	588	0.25	0.7	7650	4.0	1000	7.5	42	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	CLASS W/PENTHOUSE	381.2	277	88/71	66	0.80	51	40.5	5.8	4	550	783	62.9	72	72	550	0.24	8.8	11775	A.5	833	15	100	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	CLASS EA/PENTHOUSE	361	262	88/71	66	0.74	48.2	40.5	5.2	4	550	742	49.5	9	72	520	0.25	2.4	11400	A.5	837	15	100	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	COM. CENT./PENTHOUSE	433	345	80/66	55	0.90	58	40.5	6.8	6	550	150	10.0	59	72	600	0.29	0.2	12650	A.5	820	15	100	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	NOT USED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100-150	KITCHEN/1ST FLOOR	-	-	-	-	-	-	-	-	-	-	351	23.3	9	65	532	0.22	0.8	5000	3.5	1026	5	100	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	KITCHEN/1ST FLOOR	-	-	-	-	-	-	-	-	-	-	318	21.2	9	68	480	0.17	0.9	5000	3.0	1103	5	100	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	BOILER RM/1ST FLOOR	-	-	-	-	-	-	-	-	-	-	127	8.4	9	68	340	0.23	0.8	2000	3.0	1348	3	100	BASED ON CARRIER MODEL 39L OR UNIFLEX	
100-150	LOCKERS/1ST FLOOR	-	-	-	-	-	-	-	-	-	-	283	19.5	9	72	483	0.19	0.9	4350	4.0	1339	3	100	BASED ON CARRIER MODEL 39L OR UNIFLEX	

FAN COIL UNIT SCHEDULE																												
UNIT MARK	TOTAL BENS. (MESH)	LAT. (IN)	LAT. (IN)	COOLING COIL (CHILLED WATER - 200 GLYCOL)			HOT WATER HEATING COIL			SUPPLY FAN			REMARKS / MANUFACTURER															
				WATER FLOW (GPM)	WATER P.D. (FT.)	MIN. BENS.	MAX. FACE VEL. (FPM)	MIN. RPM	MAX. AIR W.P. (PSI)	CFM	TSP	RPM		HP														
100-150	16.3	12.1	80/67	52.5	2.2	40.5	55.5	0.3	6.0	0.5	185	165	80.4	0.3	440	0.4	1/6	120/1/60	H	-	-	-	0	TYPICAL FOR PREP. ROOM BASED ON YORK DCP-06				
100-150	8.7	6.5	80/67	56.9	1.3	40.5	55.5	4.8	10.0	1.0	185	165	104.5	1.0	285	0	1/6	120/1/60	H	-	-	-	0	TYPICAL FOR CORRIDOR BASED ON YORK FE-03				
100-150	28.4	23.2	80/67	57.9	3.8	40.5	55.5	3.8	15.0	1.0	185	165	85.0	1.0	1070	0	2	1/6	120/1/60	H	-	-	0	TYPICAL FOR CLASS ROOM BASED ON YORK FE-12				
100-150	33.2	25.7	80/67	56.4	4.4	40.5	55.5	2.8	20.0	1.0	185	165	81.7	0.3	1100	0.4	2	1/6	120/1/60	H	-	-	0	TYPICAL FOR CLASS ROOM BASED ON YORK FE-12				
100-150	-	-	-	-	-	-	-	-	-	-	-	21.5	1.5	185	165	87.0	1.0	1200	1.0	3/4	480/3/60	-	37	33.5	83	55	30	FQJ FOR COMPUTER LAB BASED ON YORK MODEL DE
100-150	-	-	-	-	-	-	-	-	-	-	-	19.8	1.3	185	165	82	1.0	2000	1.5	1	480/3/60	-	52.2	46.7	80	55	10	FQJ FOR CABLE TV STUDIO BASED ON YORK MODEL DE
100-150	71.4	55.1	80/67	57.6	8.5	40.5	55.5	1.0	32.0	1.0	185	165	103.0	0.3	2500	0.5	1	480/3/60	H	-	-	-	0	TYPICAL FOR SCIENCE LAB BASED ON YORK DBA-30				
100-150	19.0	14.0	80/67	58.2	2.5	40.5	55.5	4.0	21.3	1.0	185	165	103.0	0.3	690	0	1/6	120/1/60	H	-	-	-	0	TYPICAL FOR STAIR BASED ON YORK FE-08				

ELECTRIC COIL SCHEDULE									
UNIT MARK	CFM	MBH	W	MAX. FACE VEL. (FPM)	ΔT (°F)	APD (IN WG)	REMARKS		
100-150	800	8.7	2.6	1000	10	.08	BASED ON TITUS ELECTRIC DUCT HEATERS		
100-150	800	8.7	2.6	1000	10	.08	BASED ON TITUS ELECTRIC DUCT HEATERS		
100-150	4825	52.0	15.3	1000	10	.07	BASED ON TITUS ELECTRIC DUCT HEATERS		
100-150	1125	12.2	3.6	1000	10	.08	BASED ON TITUS ELECTRIC DUCT HEATERS		

SOUND ATTENUATOR SCHEDULE									
UNIT MARK	SERVICE/LOCATION	CFM	SIZE (IN) (W X H X L)	MAX. SP. (IN)	DYNAMIC INSERTION LOSS (DB)	REMARKS			

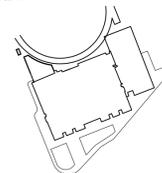
CONSULTANTS

Revision:
Date: By: Description:

CLIENT AND/OR PROJECT INFO.

CHELSEA HIGH SCHOOL
299 EVERETT AVE.
CHELSEA, MA

Key Plan:



Scale:

Jacobs Project No.: R7W71639

Drawing Title:
FIRST AND SECOND
FLOOR MECHANICAL
PLANS

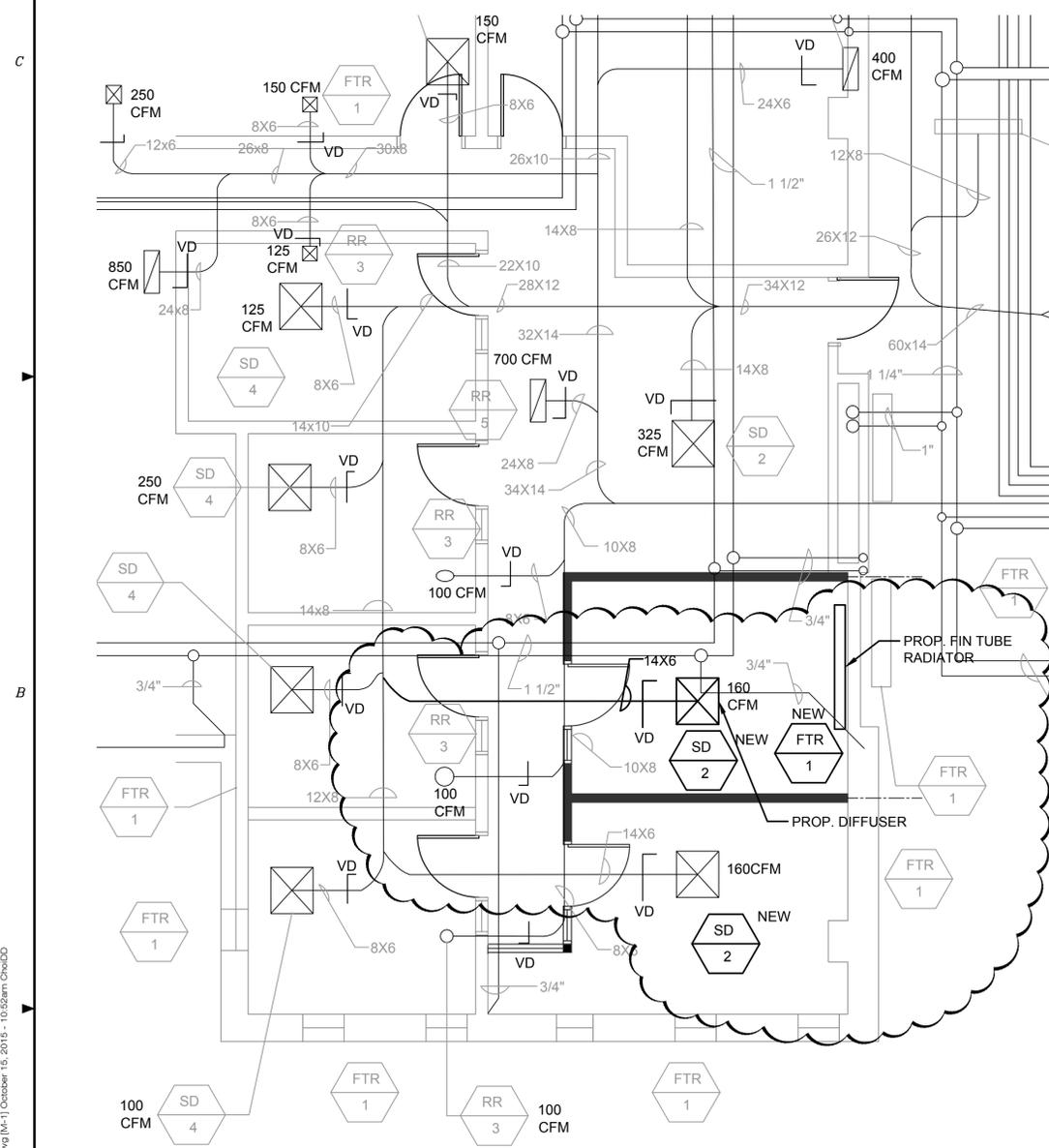
Date: October 2015

Designed By: D.C.
Drawn By: D.C.
Checked By: L.W.

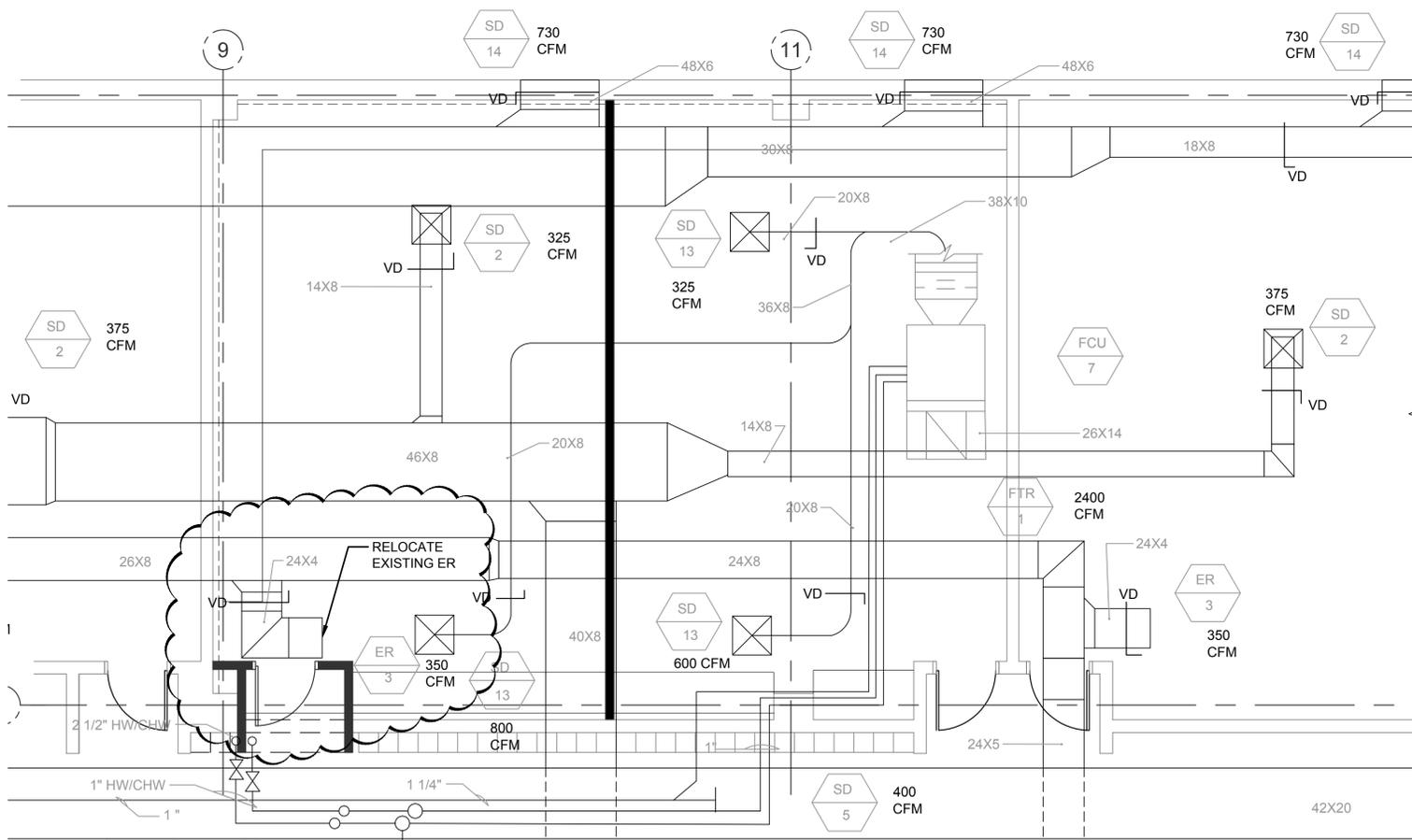
Drawing No.:
M-1

GENERAL NOTES:

1. UNLESS OTHERWISE NOTED, ALL EXISTING CONDITION OF HVAC SYSTEM TO REMAIN AS IS.
2. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEYING EXISTING CONDITION AND REPORTING DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, AND BUILT CONDITION OF HVAC SYSTEM.
3. GENERAL CONTRACTOR HAS BEEN PROVIDED WITH ORIGINAL DESIGN DOCUMENTS DATED 4-6-96. REFER TO SHEETS M-1, M-2, M-3, M-4, M-5, M-8, M-9, M-10, M-11, M-12, AND M-13 PROVIDED AS APPENDIX TO CONTRACT DOCUMENT.
4. REFER TO SHEET M-1 FOR ALL SYMBOLS AND ABBREVIATIONS.
5. GENERAL CONTRACTOR SHALL VERIFY EXISTING THERMOSTATIC CONTROL CONFORMS FOR NEW HVAC WORK.
6. ALL NEW MATERIALS SHALL MATCH EXISTING.



1 OFFICE MECHANICAL PLAN - FIRST FLOOR
M-1 SCALE: 1/4" = 1'-0"



2 CLASSROOM MECHANICAL PLAN - SECOND FLOOR
M-1 SCALE: 1/4" = 1'-0"

Jacobs - R:\Chelsea Public Schools\R7W71639_Chelsea HS Interior Renovation\700 CAD\705-HVAC\M-1.dwg (M-1) October 15, 2015 - 10:52am CheCD