

**Invitation to Bid for  
Chelsea High School Blue Gym Lighting Upgrade**

For the City of Chelsea, MA

Contract # 2016-29

August 2015

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PLANS & SPECS

CITY OF CHELSEA  
MASSACHUSETTS  
NOTICE TO BIDDERS

# Chelsea High School Blue Gymnasium Lighting Upgrade

299 EVERETT AVE.  
CHELSEA, MASSACHUSETTS

The City of Chelsea, Chelsea, Massachusetts invites sealed proposals from Contractors to replace and upgrade the existing light fixtures within the Blue wing Auxiliary Gymnasium Space.

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:

- There are currently 96 ceiling mounted fixtures without protection against vandalism providing 10/100Lux at 2'-5" work plane level. The existing lighting control scheme for the Gymnasium is manual zonal control without occupancy sensor.
- The lighting system (luminaires and controls) proposed, which will replace the existing light fixtures, will in turn satisfy energy requirement as well as visual and environmental requirements for a gymnasium / classroom space. The new design is intended to provide adequate level of lighting for exam taking within the space. The evaluation and associated recommendations will comply with the local energy code and IESNA (*Illuminating Engineering Society of North America*, Lighting Handbook, (Tenth edition). Commercial specification grade luminaires shall be recommended as required.
- The proposed LED luminaire will require 24 fixtures (25% less than the actual) for the space, providing an average of 50fc at 2'-5" work plane as recommended per IESNA with output power of 140W per fixture (3360W total). Caged Ceiling/wall mounted occupancy sensors with dual technology (ultrasonic and infrared) and control switches will be provided for energy savings.

**The estimated cost of the work is \$ 100,000**

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 10:00 AM., E.D.T., August 13, 2015.** 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 September 3, 2015** at which place and time they shall be publicly opened, read aloud and recorded for presentation by the Awarding Authority.

An **OPTIONAL** pre-bid conference will be held for all interested parties on-site at the High School, 299 Everett Ave, Chelsea, MA on **August 20, 2015 at 11:00 AM, E.D.T.** Attendance at this pre-bid conference is **OPTIONAL** 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 treasurers 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: Electrical 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](mailto: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 Blue Gym Lighting Upgrade**. 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 1<sup>st</sup> and ends June 30<sup>th</sup> 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:

<b>EVENT</b>	<b>DATE</b>
IFB Released	8/13/2015
<u>Optional On-site Pre-Bid Meeting</u>	<u>8/20/2015 at 11:00am</u>
Deadline for Written Inquiries	8/31/2015
Response to Written Inquiries	9/1/2015
Due Date for Responses	9/3/2015 at 1:00pm

### **1.20 Duration of Contract**

The term of this contract will commence upon signature of agreement and end no later than 12/15/2015.

**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 Inquiries**

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](mailto: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 Blue Gym Lighting Upgrade**".

### **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 – Chelsea High School Blue Gym Lighting Upgrade**

### 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:

There are currently 96 ceiling mounted fixtures without protection against vandalism providing 10/100Lux at 2'-5" work plane level. The existing lighting control scheme for the Gymnasium is manual zonal control without occupancy sensor.

The lighting system (luminaires and controls) proposed, which will replace the existing light fixtures, will in turn satisfy energy requirement as well as visual and environmental requirements for a gymnasium / classroom space. The new design is intended to provide adequate level of lighting for exam taking within the space. The evaluation and associated recommendations will comply with the local energy code and IESNA (*Illuminating Engineering Society of North America*, Lighting Handbook, (Tenth edition). Commercial specification grade luminaires shall be recommended as required.

The proposed LED luminaire will require 24 fixtures (25% less than the actual) for the space, providing an average of 50fc at 2'-5" work plane as recommended per IESNA with output power of 140W per fixture (3360W total). Caged Ceiling/wall mounted occupancy sensors with dual technology (ultrasonic and infrared) and control switches will be provided for energy savings.

Project will be constructed under a general construction contract with the Mechanical Contractor acting as the general contractor. Repeat subparagraph above as often as necessary for all contracts for Project.

#### 2.4 WORK SEQUENCE AND SCHEDULE

- A. The Construction Schedule shall be based on the work being completed by Dec. 15<sup>th</sup>, 2015, 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 the crane used to access the roof levels, 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 installation new light fixtures 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 found on sheets A-002 and E-002
  - 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 011000

**Bidder Information Form**

**Bid for Chelsea High School Blue Gym Lighting Upgrade**

(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:

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\_\_\_\_\_  
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 \_\_\_\_\_, 2015, 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 Blue Gym Lighting Upgrade**

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 Blue Gym Lighting Upgrade**, 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 <span style="float: right;">(words)</span></p>	<hr style="border: 1px solid black; margin: 10px 0;"/> <p style="font-size: 0.8em; margin: 0; text-align: center;">(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\_\_\_\_\_, 2015.

\_\_\_\_\_  
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 Blue Gym Lighting Upgrade**

**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))

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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  
Edward Keefe, Acting City Manager  
500 Broadway  
City Hall  
Chelsea, MA 02150

With a Copy to:  
Cheryl Anne Watson  
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

\_\_\_\_\_  
Edward Keefe, Acting 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

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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

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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

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**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)*

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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:** 2016-29 **City/Town:** CHELSEA  
**Description of Work:** Blue Gym Lighting Upgrades Project - Replace and upgrade existing lighting in the Chelsea High School gym  
**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
<b>Construction</b>						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	08/01/2015	\$32.75	\$10.41	\$9.33	\$0.00	\$52.49
	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>	08/01/2015	\$32.82	\$10.41	\$9.33	\$0.00	\$52.56
	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>	08/01/2015	\$32.94	\$10.41	\$9.33	\$0.00	\$52.68
	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>	06/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	12/01/2015	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	06/01/2016	\$37.35	\$7.30	\$13.20	\$0.00	\$57.85
	12/01/2016	\$38.35	\$7.30	\$13.20	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT &amp; FROST INSULATORS LOCAL 6 (BOSTON)</i>	06/01/2015	\$33.43	\$10.40	\$5.95	\$0.00	\$49.78
	12/01/2015	\$34.38	\$10.40	\$5.95	\$0.00	\$50.73
ASPHALT RAKER <i>LABORERS - ZONE 1</i>	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.83	\$10.00	\$14.55	\$0.00	\$67.38
	12/01/2015	\$44.08	\$10.00	\$14.55	\$0.00	\$68.63
	06/01/2016	\$44.83	\$10.00	\$14.55	\$0.00	\$69.38
	12/01/2016	\$46.08	\$10.00	\$14.55	\$0.00	\$70.63
	06/01/2017	\$47.08	\$10.00	\$14.55	\$0.00	\$71.63
	12/01/2017	\$48.08	\$10.00	\$14.55	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.83	\$10.00	\$14.55	\$0.00	\$67.38
	12/01/2015	\$44.08	\$10.00	\$14.55	\$0.00	\$68.63
	06/01/2016	\$44.83	\$10.00	\$14.55	\$0.00	\$69.38
	12/01/2016	\$46.08	\$10.00	\$14.55	\$0.00	\$70.63
	06/01/2017	\$47.08	\$10.00	\$14.55	\$0.00	\$71.63
	12/01/2017	\$48.08	\$10.00	\$14.55	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 1</i>	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 1</i>	06/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	12/01/2015	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	06/01/2016	\$37.35	\$7.30	\$13.20	\$0.00	\$57.85
	12/01/2016	\$38.35	\$7.30	\$13.20	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2015	\$40.32	\$6.97	\$16.21	\$0.00	\$63.50
	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

**Apprentice - BOILERMAKER - Local 29**

**Effective Date - 01/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$26.21	\$6.97	\$10.54	\$0.00	\$43.72
2	65	\$26.21	\$6.97	\$10.54	\$0.00	\$43.72
3	70	\$28.22	\$6.97	\$11.35	\$0.00	\$46.54
4	75	\$30.24	\$6.97	\$12.16	\$0.00	\$49.37
5	80	\$32.26	\$6.97	\$12.97	\$0.00	\$52.20
6	85	\$34.27	\$6.97	\$13.78	\$0.00	\$55.02
7	90	\$36.29	\$6.97	\$14.59	\$0.00	\$57.85
8	95	\$38.30	\$6.97	\$15.40	\$0.00	\$60.67

**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

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) <i>BRICKLAYERS LOCAL 3 (BOSTON)</i>	08/01/2015	\$49.86	\$10.18	\$18.57	\$0.00	\$78.61
	02/01/2016	\$50.43	\$10.18	\$18.57	\$0.00	\$79.18
	08/01/2016	\$51.33	\$10.18	\$18.65	\$0.00	\$80.16
	02/01/2017	\$51.90	\$10.18	\$18.65	\$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 - 08/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.93	\$10.18	\$18.57	\$0.00	\$53.68
2	60	\$29.92	\$10.18	\$18.57	\$0.00	\$58.67
3	70	\$34.90	\$10.18	\$18.57	\$0.00	\$63.65
4	80	\$39.89	\$10.18	\$18.57	\$0.00	\$68.64
5	90	\$44.87	\$10.18	\$18.57	\$0.00	\$73.62

**Effective Date - 02/01/2016**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.22	\$10.18	\$18.57	\$0.00	\$53.97
2	60	\$30.26	\$10.18	\$18.57	\$0.00	\$59.01
3	70	\$35.30	\$10.18	\$18.57	\$0.00	\$64.05
4	80	\$40.34	\$10.18	\$18.57	\$0.00	\$69.09
5	90	\$45.39	\$10.18	\$18.57	\$0.00	\$74.14

**Notes:**

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**Apprentice to Journeyworker Ratio:1:5**

<b>BULLDOZER/GRADER/SCRAPER</b> <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.42	\$10.00	\$14.55	\$0.00	\$66.97
	12/01/2015	\$43.66	\$10.00	\$14.55	\$0.00	\$68.21
	06/01/2016	\$44.41	\$10.00	\$14.55	\$0.00	\$68.96
	12/01/2016	\$45.64	\$10.00	\$14.55	\$0.00	\$70.19
	06/01/2017	\$46.63	\$10.00	\$14.55	\$0.00	\$71.18
	12/01/2017	\$47.62	\$10.00	\$14.55	\$0.00	\$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
<b>CAISSON &amp; UNDERPINNING BOTTOM MAN</b> <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2015	\$36.20	\$7.30	\$13.40	\$0.00	\$56.90
	12/01/2015	\$36.95	\$7.30	\$13.40	\$0.00	\$57.65
	06/01/2016	\$37.70	\$7.30	\$13.40	\$0.00	\$58.40
	12/01/2016	\$38.70	\$7.30	\$13.40	\$0.00	\$59.40
For apprentice rates see "Apprentice- LABORER"						
<b>CAISSON &amp; UNDERPINNING LABORER</b> <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2015	\$35.05	\$7.30	\$13.40	\$0.00	\$55.75
	12/01/2015	\$35.80	\$7.30	\$13.40	\$0.00	\$56.50
	06/01/2016	\$36.55	\$7.30	\$13.40	\$0.00	\$57.25
	12/01/2016	\$37.55	\$7.30	\$13.40	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						
<b>CAISSON &amp; UNDERPINNING TOP MAN</b> <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2015	\$35.05	\$7.30	\$13.40	\$0.00	\$55.75
	12/01/2015	\$35.80	\$7.30	\$13.40	\$0.00	\$56.50
	06/01/2016	\$36.55	\$7.30	\$13.40	\$0.00	\$57.25
	12/01/2016	\$37.55	\$7.30	\$13.40	\$0.00	\$58.25
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 1</i>	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$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

**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 <i>BRICKLAYERS LOCAL 3 (BOSTON)</i>	07/01/2015	\$45.82	\$10.90	\$18.71	\$1.30	\$76.73
	01/01/2016	\$46.44	\$10.90	\$18.71	\$1.30	\$77.35

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - CEMENT MASONRY/PLASTERING - Eastern Mass (Boston)**

**Effective Date - 07/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.91	\$10.90	\$12.21	\$0.00	\$46.02
2	60	\$27.49	\$10.90	\$13.71	\$1.30	\$53.40
3	65	\$29.78	\$10.90	\$14.71	\$1.30	\$56.69
4	70	\$32.07	\$10.90	\$15.71	\$1.30	\$59.98
5	75	\$34.37	\$10.90	\$16.71	\$1.30	\$63.28
6	80	\$36.66	\$10.90	\$17.71	\$1.30	\$66.57
7	90	\$41.24	\$10.90	\$18.71	\$1.30	\$72.15

**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	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
LABORERS - ZONE 1	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES	06/01/2015	\$43.83	\$10.00	\$14.55	\$0.00	\$68.38
OPERATING ENGINEERS LOCAL 4	12/01/2015	\$45.08	\$10.00	\$14.55	\$0.00	\$69.63
	06/01/2016	\$45.83	\$10.00	\$14.55	\$0.00	\$70.38
	12/01/2016	\$47.08	\$10.00	\$14.55	\$0.00	\$71.63
	06/01/2017	\$48.08	\$10.00	\$14.55	\$0.00	\$72.63
	12/01/2017	\$49.08	\$10.00	\$14.55	\$0.00	\$73.63

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

COMPRESSOR OPERATOR	06/01/2015	\$29.61	\$10.00	\$14.55	\$0.00	\$54.16
OPERATING ENGINEERS LOCAL 4	12/01/2015	\$30.48	\$10.00	\$14.55	\$0.00	\$55.03
	06/01/2016	\$31.00	\$10.00	\$14.55	\$0.00	\$55.55
	12/01/2016	\$31.87	\$10.00	\$14.55	\$0.00	\$56.42
	06/01/2017	\$32.56	\$10.00	\$14.55	\$0.00	\$57.11
	12/01/2017	\$33.25	\$10.00	\$14.55	\$0.00	\$57.80

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DELEADER (BRIDGE) PAINTERS LOCAL 35 - ZONE 1	07/01/2015	\$48.56	\$7.85	\$16.10	\$0.00	\$72.51
	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 - 07/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.28	\$7.85	\$0.00	\$0.00	\$32.13
2	55	\$26.71	\$7.85	\$3.66	\$0.00	\$38.22
3	60	\$29.14	\$7.85	\$3.99	\$0.00	\$40.98
4	65	\$31.56	\$7.85	\$4.32	\$0.00	\$43.73
5	70	\$33.99	\$7.85	\$14.11	\$0.00	\$55.95
6	75	\$36.42	\$7.85	\$14.44	\$0.00	\$58.71
7	80	\$38.85	\$7.85	\$14.77	\$0.00	\$61.47
8	90	\$43.70	\$7.85	\$15.44	\$0.00	\$66.99

**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

**Notes:**  
Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

DEMO: ADZEMAN LABORERS - ZONE 1	06/01/2015	\$35.25	\$7.30	\$13.20	\$0.00	\$55.75
	12/01/2015	\$36.00	\$7.30	\$13.20	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 1	06/01/2015	\$36.25	\$7.30	\$13.20	\$0.00	\$56.75
	12/01/2015	\$37.00	\$7.30	\$13.20	\$0.00	\$57.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS LABORERS - ZONE 1	06/01/2015	\$36.00	\$7.30	\$13.20	\$0.00	\$56.50
	12/01/2015	\$36.75	\$7.30	\$13.20	\$0.00	\$57.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 1	06/01/2015	\$36.25	\$7.30	\$13.20	\$0.00	\$56.75
	12/01/2015	\$37.00	\$7.30	\$13.20	\$0.00	\$57.50
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR LABORERS - ZONE 1	06/01/2015	\$36.00	\$7.30	\$13.20	\$0.00	\$56.50
	12/01/2015	\$36.75	\$7.30	\$13.20	\$0.00	\$57.25

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER	06/01/2015	\$35.25	\$7.30	\$13.20	\$0.00	\$55.75
<i>LABORERS - ZONE 1</i>	12/01/2015	\$36.00	\$7.30	\$13.20	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR	06/01/2015	\$42.42	\$10.00	\$14.55	\$0.00	\$66.97
<i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$43.66	\$10.00	\$14.55	\$0.00	\$68.21
	06/01/2016	\$44.41	\$10.00	\$14.55	\$0.00	\$68.96
	12/01/2016	\$45.64	\$10.00	\$14.55	\$0.00	\$70.19
	06/01/2017	\$46.63	\$10.00	\$14.55	\$0.00	\$71.18
	12/01/2017	\$47.62	\$10.00	\$14.55	\$0.00	\$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER	08/01/2015	\$58.86	\$9.80	\$19.23	\$0.00	\$87.89
<i>PILE DRIVER LOCAL 56 (ZONE 1)</i>						
DIVER TENDER	08/01/2015	\$42.04	\$9.80	\$19.23	\$0.00	\$71.07
<i>PILE DRIVER LOCAL 56 (ZONE 1)</i>						
DIVER TENDER (EFFLUENT)	08/01/2015	\$63.06	\$9.80	\$19.23	\$0.00	\$92.09
<i>PILE DRIVER LOCAL 56 (ZONE 1)</i>						
DIVER/SLURRY (EFFLUENT)	08/01/2015	\$88.23	\$9.80	\$19.23	\$0.00	\$117.26
<i>PILE DRIVER LOCAL 56 (ZONE 1)</i>						
DRAWBRIDGE OPERATOR (Construction)	03/01/2015	\$45.17	\$13.00	\$15.40	\$0.00	\$73.57
<i>ELECTRICIANS LOCAL 103</i>	09/01/2015	\$46.13	\$13.00	\$15.43	\$0.00	\$74.56
	03/01/2016	\$47.08	\$13.00	\$15.46	\$0.00	\$75.54
For apprentice rates see "Apprentice- ELECTRICIAN"						
ELECTRICIAN	03/01/2015	\$45.17	\$13.00	\$15.40	\$0.00	\$73.57
<i>ELECTRICIANS LOCAL 103</i>	09/01/2015	\$46.13	\$13.00	\$15.43	\$0.00	\$74.56
	03/01/2016	\$47.08	\$13.00	\$15.46	\$0.00	\$75.54

**Apprentice - ELECTRICIAN - Local 103**

**Effective Date - 03/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.07	\$13.00	\$0.54	\$0.00	\$31.61
2	40	\$18.07	\$13.00	\$0.54	\$0.00	\$31.61
3	45	\$20.33	\$13.00	\$11.64	\$0.00	\$44.97
4	45	\$20.33	\$13.00	\$11.64	\$0.00	\$44.97
5	50	\$22.59	\$13.00	\$11.98	\$0.00	\$47.57
6	55	\$24.84	\$13.00	\$12.33	\$0.00	\$50.17
7	60	\$27.10	\$13.00	\$12.66	\$0.00	\$52.76
8	65	\$29.36	\$13.00	\$13.01	\$0.00	\$55.37
9	70	\$31.62	\$13.00	\$13.35	\$0.00	\$57.97
10	75	\$33.88	\$13.00	\$13.70	\$0.00	\$60.58

**Effective Date - 09/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.45	\$13.00	\$0.55	\$0.00	\$32.00
2	40	\$18.45	\$13.00	\$0.55	\$0.00	\$32.00
3	45	\$20.76	\$13.00	\$11.65	\$0.00	\$45.41
4	45	\$20.76	\$13.00	\$11.65	\$0.00	\$45.41
5	50	\$23.07	\$13.00	\$11.99	\$0.00	\$48.06
6	55	\$25.37	\$13.00	\$12.34	\$0.00	\$50.71
7	60	\$27.68	\$13.00	\$12.68	\$0.00	\$53.36
8	65	\$29.98	\$13.00	\$13.03	\$0.00	\$56.01
9	70	\$32.29	\$13.00	\$13.37	\$0.00	\$58.66
10	75	\$34.60	\$13.00	\$13.72	\$0.00	\$61.32

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

**Apprentice to Journeyworker Ratio:2:3\*\*\***

ELEVATOR CONSTRUCTOR	01/01/2015	\$53.30	\$13.58	\$14.21	\$0.00	\$81.09
ELEVATOR CONSTRUCTORS LOCAL 4	01/01/2016	\$54.53	\$14.43	\$14.96	\$0.00	\$83.92
	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 - 01/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.65	\$13.58	\$0.00	\$0.00	\$40.23
2	55	\$29.32	\$13.58	\$14.21	\$0.00	\$57.11
3	65	\$34.65	\$13.58	\$14.21	\$0.00	\$62.44
4	70	\$37.31	\$13.58	\$14.21	\$0.00	\$65.10
5	80	\$42.64	\$13.58	\$14.21	\$0.00	\$70.43

**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

**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>	01/01/2015	\$37.31	\$13.58	\$14.21	\$0.00	\$65.10
	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>	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	05/01/2015	\$40.22	\$10.00	\$14.30	\$0.00	\$64.52
	11/01/2015	\$40.80	\$10.00	\$14.30	\$0.00	\$65.10
	05/01/2016	\$41.69	\$10.00	\$14.30	\$0.00	\$65.99
	11/01/2016	\$42.28	\$10.00	\$14.30	\$0.00	\$66.58
	05/01/2017	\$43.16	\$10.00	\$14.30	\$0.00	\$67.46
	11/01/2017	\$43.89	\$10.00	\$14.30	\$0.00	\$68.19
	05/01/2018	\$44.60	\$10.00	\$14.30	\$0.00	\$68.90

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	05/01/2015	\$41.65	\$10.00	\$14.30	\$0.00	\$65.95
	11/01/2015	\$42.24	\$10.00	\$14.30	\$0.00	\$66.54
	05/01/2016	\$43.13	\$10.00	\$14.30	\$0.00	\$67.43
	11/01/2016	\$43.73	\$10.00	\$14.30	\$0.00	\$68.03
	05/01/2017	\$44.62	\$10.00	\$14.30	\$0.00	\$68.92
	11/01/2017	\$45.35	\$10.00	\$14.30	\$0.00	\$69.65
	05/01/2018	\$46.07	\$10.00	\$14.30	\$0.00	\$70.37

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>	05/01/2015	\$21.68	\$10.00	\$14.30	\$0.00	\$45.98
	11/01/2015	\$22.02	\$10.00	\$14.30	\$0.00	\$46.32
	05/01/2016	\$22.54	\$10.00	\$14.30	\$0.00	\$46.84
	11/01/2016	\$22.89	\$10.00	\$14.30	\$0.00	\$47.19
	05/01/2017	\$23.42	\$10.00	\$14.30	\$0.00	\$47.72
	11/01/2017	\$23.84	\$10.00	\$14.30	\$0.00	\$48.14
	05/01/2018	\$24.27	\$10.00	\$14.30	\$0.00	\$48.57
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	03/01/2015	\$45.17	\$13.00	\$15.40	\$0.00	\$73.57
	09/01/2015	\$46.13	\$13.00	\$15.43	\$0.00	\$74.56
	03/01/2016	\$47.08	\$13.00	\$15.46	\$0.00	\$75.54
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS LOCAL 103</i>	03/01/2015	\$33.88	\$13.00	\$13.70	\$0.00	\$60.58
	09/01/2015	\$34.60	\$13.00	\$13.72	\$0.00	\$61.32
	03/01/2016	\$35.31	\$13.00	\$13.74	\$0.00	\$62.05
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$35.64	\$10.00	\$14.55	\$0.00	\$60.19
	12/01/2015	\$36.69	\$10.00	\$14.55	\$0.00	\$61.24
	06/01/2016	\$37.31	\$10.00	\$14.55	\$0.00	\$61.86
	12/01/2016	\$38.35	\$10.00	\$14.55	\$0.00	\$62.90
	06/01/2017	\$39.19	\$10.00	\$14.55	\$0.00	\$63.74
	12/01/2017	\$40.02	\$10.00	\$14.55	\$0.00	\$64.57
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER <i>LABORERS - ZONE 1</i>	06/01/2015	\$20.50	\$7.30	\$13.20	\$0.00	\$41.00
	12/01/2015	\$20.50	\$7.30	\$13.20	\$0.00	\$41.00
	06/01/2016	\$20.50	\$7.30	\$13.20	\$0.00	\$41.00
	12/01/2016	\$20.50	\$7.30	\$13.20	\$0.00	\$41.00
For apprentice rates see "Apprentice- LABORER"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE 1</i>	09/01/2014	\$40.40	\$9.80	\$17.21	\$0.00	\$67.41

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - FLOORCOVERER - Local 2168 Zone 1**

**Effective Date - 09/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.20	\$9.80	\$1.79	\$0.00	\$31.79
2	55	\$22.22	\$9.80	\$1.79	\$0.00	\$33.81
3	60	\$24.24	\$9.80	\$11.84	\$0.00	\$45.88
4	65	\$26.26	\$9.80	\$11.84	\$0.00	\$47.90
5	70	\$28.28	\$9.80	\$13.63	\$0.00	\$51.71
6	75	\$30.30	\$9.80	\$13.63	\$0.00	\$53.73
7	80	\$32.32	\$9.80	\$15.42	\$0.00	\$57.54
8	85	\$34.34	\$9.80	\$15.42	\$0.00	\$59.56

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

<b>FORK LIFT/CHERRY PICKER</b>	06/01/2015	\$42.83	\$10.00	\$14.55	\$0.00	\$67.38
<i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$44.08	\$10.00	\$14.55	\$0.00	\$68.63
	06/01/2016	\$44.83	\$10.00	\$14.55	\$0.00	\$69.38
	12/01/2016	\$46.08	\$10.00	\$14.55	\$0.00	\$70.63
	06/01/2017	\$47.08	\$10.00	\$14.55	\$0.00	\$71.63
	12/01/2017	\$48.08	\$10.00	\$14.55	\$0.00	\$72.63

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

<b>GENERATOR/LIGHTING PLANT/HEATERS</b>	06/01/2015	\$29.61	\$10.00	\$14.55	\$0.00	\$54.16
<i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2015	\$30.48	\$10.00	\$14.55	\$0.00	\$55.03
	06/01/2016	\$31.00	\$10.00	\$14.55	\$0.00	\$55.55
	12/01/2016	\$31.87	\$10.00	\$14.55	\$0.00	\$56.42
	06/01/2017	\$32.56	\$10.00	\$14.55	\$0.00	\$57.11
	12/01/2017	\$33.25	\$10.00	\$14.55	\$0.00	\$57.80

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

<b>GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)</b>	07/01/2015	\$43.85	\$7.85	\$16.10	\$0.00	\$67.80
<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 - 07/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.93	\$7.85	\$0.00	\$0.00	\$29.78
2	55	\$24.12	\$7.85	\$3.66	\$0.00	\$35.63
3	60	\$26.31	\$7.85	\$3.99	\$0.00	\$38.15
4	65	\$28.50	\$7.85	\$4.32	\$0.00	\$40.67
5	70	\$30.70	\$7.85	\$14.11	\$0.00	\$52.66
6	75	\$32.89	\$7.85	\$14.44	\$0.00	\$55.18
7	80	\$35.08	\$7.85	\$14.77	\$0.00	\$57.70
8	90	\$39.47	\$7.85	\$15.44	\$0.00	\$62.76

**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

**Notes:**  
Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

HOISTING ENGINEER/CRANES/GRADALLS	06/01/2015	\$42.83	\$10.00	\$14.55	\$0.00	\$67.38
OPERATING ENGINEERS LOCAL 4	12/01/2015	\$44.08	\$10.00	\$14.55	\$0.00	\$68.63
	06/01/2016	\$44.83	\$10.00	\$14.55	\$0.00	\$69.38
	12/01/2016	\$46.08	\$10.00	\$14.55	\$0.00	\$70.63
	06/01/2017	\$47.08	\$10.00	\$14.55	\$0.00	\$71.63
	12/01/2017	\$48.08	\$10.00	\$14.55	\$0.00	\$72.63

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - OPERATING ENGINEERS - Local 4**

**Effective Date - 06/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$23.56	\$10.00	\$0.00	\$0.00	\$33.56
2	60	\$25.70	\$10.00	\$14.55	\$0.00	\$50.25
3	65	\$27.84	\$10.00	\$14.55	\$0.00	\$52.39
4	70	\$29.98	\$10.00	\$14.55	\$0.00	\$54.53
5	75	\$32.12	\$10.00	\$14.55	\$0.00	\$56.67
6	80	\$34.26	\$10.00	\$14.55	\$0.00	\$58.81
7	85	\$36.41	\$10.00	\$14.55	\$0.00	\$60.96
8	90	\$38.55	\$10.00	\$14.55	\$0.00	\$63.10

**Effective Date - 12/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$24.24	\$10.00	\$0.00	\$0.00	\$34.24
2	60	\$26.45	\$10.00	\$14.55	\$0.00	\$51.00
3	65	\$28.65	\$10.00	\$14.55	\$0.00	\$53.20
4	70	\$30.86	\$10.00	\$14.55	\$0.00	\$55.41
5	75	\$33.06	\$10.00	\$14.55	\$0.00	\$57.61
6	80	\$35.26	\$10.00	\$14.55	\$0.00	\$59.81
7	85	\$37.47	\$10.00	\$14.55	\$0.00	\$62.02
8	90	\$39.67	\$10.00	\$14.55	\$0.00	\$64.22

**Notes:**

**Apprentice to Journeyworker Ratio:1:6**

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 - A	08/01/2015	\$43.31	\$10.20	\$21.48	\$2.25	\$77.24
	02/01/2016	\$44.31	\$10.20	\$21.48	\$2.25	\$78.24
	08/01/2016	\$45.46	\$10.20	\$21.48	\$2.25	\$79.39
	02/01/2017	\$46.56	\$10.20	\$21.48	\$2.25	\$80.49
	08/01/2017	\$47.66	\$10.20	\$21.48	\$2.25	\$81.59
	02/01/2018	\$48.81	\$10.20	\$21.48	\$2.25	\$82.74

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 103	03/01/2015	\$45.17	\$13.00	\$15.40	\$0.00	\$73.57
	09/01/2015	\$46.13	\$13.00	\$15.43	\$0.00	\$74.56
	03/01/2016	\$47.08	\$13.00	\$15.46	\$0.00	\$75.54

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 - A	08/01/2015	\$43.31	\$10.20	\$21.48	\$2.25	\$77.24
	02/01/2016	\$44.31	\$10.20	\$21.48	\$2.25	\$78.24
	08/01/2016	\$45.46	\$10.20	\$21.48	\$2.25	\$79.39
	02/01/2017	\$46.56	\$10.20	\$21.48	\$2.25	\$80.49
	08/01/2017	\$47.66	\$10.20	\$21.48	\$2.25	\$81.59
	02/01/2018	\$48.81	\$10.20	\$21.48	\$2.25	\$82.74

For apprentice rates see "Apprentice- SHEET METAL WORKER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING -WATER) <i>PIPEFITTERS LOCAL 537</i>	03/01/2015	\$48.69	\$9.70	\$16.89	\$0.00	\$75.28
	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>	03/01/2015	\$48.69	\$9.70	\$16.89	\$0.00	\$75.28
	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>	06/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	12/01/2015	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	06/01/2016	\$37.35	\$7.30	\$13.20	\$0.00	\$57.85
	12/01/2016	\$38.35	\$7.30	\$13.20	\$0.00	\$58.85
For apprentice rates see "Apprentice- LABORER"						
INSULATOR (PIPES & TANKS) <i>HEAT &amp; FROST INSULATORS LOCAL 6 (BOSTON)</i>	09/01/2014	\$43.31	\$11.25	\$12.60	\$0.00	\$67.16

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

**Effective Date - 09/01/2014**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.66	\$11.25	\$9.35	\$0.00	\$42.26
2	60	\$25.99	\$11.25	\$10.00	\$0.00	\$47.24
3	70	\$30.32	\$11.25	\$10.65	\$0.00	\$52.22
4	80	\$34.65	\$11.25	\$11.30	\$0.00	\$57.20

**Notes:**

Steps are 1 year

**Apprentice to Journeyworker Ratio:1:4**

IRONWORKER/WELDER <i>IRONWORKERS LOCAL 7 (BOSTON AREA)</i>	03/16/2015	\$42.11	\$7.70	\$20.25	\$0.00	\$70.06
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**Apprentice - IRONWORKER - Local 7 Boston**

**Effective Date - 03/16/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$25.27	\$7.70	\$20.25	\$0.00	\$53.22
2	70	\$29.48	\$7.70	\$20.25	\$0.00	\$57.43
3	75	\$31.58	\$7.70	\$20.25	\$0.00	\$59.53
4	80	\$33.69	\$7.70	\$20.25	\$0.00	\$61.64
5	85	\$35.79	\$7.70	\$20.25	\$0.00	\$63.74
6	90	\$37.90	\$7.70	\$20.25	\$0.00	\$65.85

**Notes:**

\*\* Structural 1:6; Ornamental 1:4

**Apprentice to Journeyworker Ratio:\*\***

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 1	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

LABORER LABORERS - ZONE 1	06/01/2015	\$35.10	\$7.30	\$13.20	\$0.00	\$55.60
	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10

**Apprentice - LABORER - Zone 1**

**Effective Date - 06/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.06	\$7.30	\$13.20	\$0.00	\$41.56
2	70	\$24.57	\$7.30	\$13.20	\$0.00	\$45.07
3	80	\$28.08	\$7.30	\$13.20	\$0.00	\$48.58
4	90	\$31.59	\$7.30	\$13.20	\$0.00	\$52.09

**Effective Date - 12/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.51	\$7.30	\$13.20	\$0.00	\$42.01
2	70	\$25.10	\$7.30	\$13.20	\$0.00	\$45.60
3	80	\$28.68	\$7.30	\$13.20	\$0.00	\$49.18
4	90	\$32.27	\$7.30	\$13.20	\$0.00	\$52.77

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

<b>Classification</b>	<b>Effective Date</b>	<b>Base Wage</b>	<b>Health</b>	<b>Pension</b>	<b>Supplemental Unemployment</b>	<b>Total Rate</b>
LABORER: CARPENTER TENDER <i>LABORERS - ZONE 1</i>	06/01/2015	\$35.10	\$7.30	\$13.20	\$0.00	\$55.60
	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 1</i>	06/01/2015	\$35.10	\$7.30	\$13.20	\$0.00	\$55.60
	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 1</i>	06/01/2015	\$35.25	\$7.30	\$13.20	\$0.00	\$55.75
	12/01/2015	\$36.00	\$7.30	\$13.20	\$0.00	\$56.50
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER <i>LABORERS - ZONE 1</i>	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 1</i>	06/01/2015	\$35.10	\$7.30	\$13.20	\$0.00	\$55.60
	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 1</i>	06/01/2015	\$35.10	\$7.30	\$13.20	\$0.00	\$55.60
	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$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>	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	08/01/2015	\$38.08	\$10.18	\$17.25	\$0.00	\$65.51
	02/01/2016	\$38.53	\$10.18	\$17.25	\$0.00	\$65.96
	08/01/2016	\$39.23	\$10.18	\$17.33	\$0.00	\$66.74
	02/01/2017	\$39.69	\$10.18	\$17.33	\$0.00	\$67.20

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

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

**Effective Date - 08/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.04	\$10.18	\$17.25	\$0.00	\$46.47
2	60	\$22.85	\$10.18	\$17.25	\$0.00	\$50.28
3	70	\$26.66	\$10.18	\$17.25	\$0.00	\$54.09
4	80	\$30.46	\$10.18	\$17.25	\$0.00	\$57.89
5	90	\$34.27	\$10.18	\$17.25	\$0.00	\$61.70

**Effective Date - 02/01/2016**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.27	\$10.18	\$17.25	\$0.00	\$46.70
2	60	\$23.12	\$10.18	\$17.25	\$0.00	\$50.55
3	70	\$26.97	\$10.18	\$17.25	\$0.00	\$54.40
4	80	\$30.82	\$10.18	\$17.25	\$0.00	\$58.25
5	90	\$34.68	\$10.18	\$17.25	\$0.00	\$62.11

**Notes:**

**Apprentice to Journeyworker Ratio:1:3**

MARBLE MASONS, TILELAYERS & TERRAZZO MECH BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2015	\$49.90	\$10.18	\$18.57	\$0.00	\$78.65
	02/01/2016	\$50.47	\$10.18	\$18.57	\$0.00	\$79.22
	08/01/2016	\$51.37	\$10.18	\$18.65	\$0.00	\$80.20
	02/01/2017	\$51.94	\$10.18	\$18.65	\$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 - 08/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.95	\$10.18	\$18.57	\$0.00	\$53.70
2	60	\$29.94	\$10.18	\$18.57	\$0.00	\$58.69
3	70	\$34.93	\$10.18	\$18.57	\$0.00	\$63.68
4	80	\$39.92	\$10.18	\$18.57	\$0.00	\$68.67
5	90	\$44.91	\$10.18	\$18.57	\$0.00	\$73.66

**Effective Date - 02/01/2016**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.24	\$10.18	\$18.57	\$0.00	\$53.99
2	60	\$30.28	\$10.18	\$18.57	\$0.00	\$59.03
3	70	\$35.33	\$10.18	\$18.57	\$0.00	\$64.08
4	80	\$40.38	\$10.18	\$18.57	\$0.00	\$69.13
5	90	\$45.42	\$10.18	\$18.57	\$0.00	\$74.17

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.42	\$10.00	\$14.55	\$0.00	\$66.97
	12/01/2015	\$43.66	\$10.00	\$14.55	\$0.00	\$68.21
	06/01/2016	\$44.41	\$10.00	\$14.55	\$0.00	\$68.96
	12/01/2016	\$45.64	\$10.00	\$14.55	\$0.00	\$70.19
	06/01/2017	\$46.63	\$10.00	\$14.55	\$0.00	\$71.18
	12/01/2017	\$47.62	\$10.00	\$14.55	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.42	\$10.00	\$14.55	\$0.00	\$66.97
	12/01/2015	\$43.66	\$10.00	\$14.55	\$0.00	\$68.21
	06/01/2016	\$44.41	\$10.00	\$14.55	\$0.00	\$68.96
	12/01/2016	\$45.64	\$10.00	\$14.55	\$0.00	\$70.19
	06/01/2017	\$46.63	\$10.00	\$14.55	\$0.00	\$71.18
	12/01/2017	\$47.62	\$10.00	\$14.55	\$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**

<b>MORTAR MIXER</b> <i>LABORERS - ZONE 1</i>	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

<b>OILER (OTHER THAN TRUCK CRANES,GRADALLS)</b> <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$21.97	\$10.00	\$14.55	\$0.00	\$46.52
	12/01/2015	\$22.62	\$10.00	\$14.55	\$0.00	\$47.17
	06/01/2016	\$23.01	\$10.00	\$14.55	\$0.00	\$47.56
	12/01/2016	\$23.66	\$10.00	\$14.55	\$0.00	\$48.21
	06/01/2017	\$24.17	\$10.00	\$14.55	\$0.00	\$48.72
	12/01/2017	\$24.69	\$10.00	\$14.55	\$0.00	\$49.24

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

<b>OILER (TRUCK CRANES, GRADALLS)</b> <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$25.68	\$10.00	\$14.55	\$0.00	\$50.23
	12/01/2015	\$26.43	\$10.00	\$14.55	\$0.00	\$50.98
	06/01/2016	\$26.89	\$10.00	\$14.55	\$0.00	\$51.44
	12/01/2016	\$27.64	\$10.00	\$14.55	\$0.00	\$52.19
	06/01/2017	\$28.24	\$10.00	\$14.55	\$0.00	\$52.79
	12/01/2017	\$28.85	\$10.00	\$14.55	\$0.00	\$53.40

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

<b>OTHER POWER DRIVEN EQUIPMENT - CLASS II</b> <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.42	\$10.00	\$14.55	\$0.00	\$66.97
	12/01/2015	\$43.66	\$10.00	\$14.55	\$0.00	\$68.21
	06/01/2016	\$44.41	\$10.00	\$14.55	\$0.00	\$68.96
	12/01/2016	\$45.64	\$10.00	\$14.55	\$0.00	\$70.19
	06/01/2017	\$46.63	\$10.00	\$14.55	\$0.00	\$71.18
	12/01/2017	\$47.62	\$10.00	\$14.55	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

<b>PAINTER (BRIDGES/TANKS)</b> <i>PAINTERS LOCAL 35 - ZONE 1</i>	07/01/2015	\$48.56	\$7.85	\$16.10	\$0.00	\$72.51
	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 - 07/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.28	\$7.85	\$0.00	\$0.00	\$32.13
2	55	\$26.71	\$7.85	\$3.66	\$0.00	\$38.22
3	60	\$29.14	\$7.85	\$3.99	\$0.00	\$40.98
4	65	\$31.56	\$7.85	\$4.32	\$0.00	\$43.73
5	70	\$33.99	\$7.85	\$14.11	\$0.00	\$55.95
6	75	\$36.42	\$7.85	\$14.44	\$0.00	\$58.71
7	80	\$38.85	\$7.85	\$14.77	\$0.00	\$61.47
8	90	\$43.70	\$7.85	\$15.44	\$0.00	\$66.99

**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

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

PAINTER (SPRAY OR SANDBLAST, NEW) *	07/01/2015	\$45.25	\$7.85	\$16.10	\$0.00	\$69.20
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 1	01/01/2016	\$46.20	\$7.85	\$16.10	\$0.00	\$70.15
	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 - 07/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.63	\$7.85	\$0.00	\$0.00	\$30.48
2	55	\$24.89	\$7.85	\$3.66	\$0.00	\$36.40
3	60	\$27.15	\$7.85	\$3.99	\$0.00	\$38.99
4	65	\$29.41	\$7.85	\$4.32	\$0.00	\$41.58
5	70	\$31.68	\$7.85	\$14.11	\$0.00	\$53.64
6	75	\$33.94	\$7.85	\$14.44	\$0.00	\$56.23
7	80	\$36.20	\$7.85	\$14.77	\$0.00	\$58.82
8	90	\$40.73	\$7.85	\$15.44	\$0.00	\$64.02

**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

**Notes:**  
Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

PAINTER (SPRAY OR SANDBLAST, REPAINT)	07/01/2015	\$43.31	\$7.85	\$16.10	\$0.00	\$67.26
PAINTERS LOCAL 35 - ZONE 1	01/01/2016	\$44.26	\$7.85	\$16.10	\$0.00	\$68.21
	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 - 07/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.66	\$7.85	\$0.00	\$0.00	\$29.51
2	55	\$23.82	\$7.85	\$3.66	\$0.00	\$35.33
3	60	\$25.99	\$7.85	\$3.99	\$0.00	\$37.83
4	65	\$28.15	\$7.85	\$4.32	\$0.00	\$40.32
5	70	\$30.32	\$7.85	\$14.11	\$0.00	\$52.28
6	75	\$32.48	\$7.85	\$14.44	\$0.00	\$54.77
7	80	\$34.65	\$7.85	\$14.77	\$0.00	\$57.27
8	90	\$38.98	\$7.85	\$15.44	\$0.00	\$62.27

**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

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

PAINTER (TRAFFIC MARKINGS) LABORERS - ZONE 1	06/01/2015	\$35.10	\$7.30	\$13.20	\$0.00	\$55.60
	12/01/2015	\$35.85	\$7.30	\$13.20	\$0.00	\$56.35
	06/01/2016	\$36.60	\$7.30	\$13.20	\$0.00	\$57.10
	12/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10

For Apprentice rates see "Apprentice- LABORER"

PAINTER / TAPER (BRUSH, NEW) *	07/01/2015	\$43.85	\$7.85	\$16.10	\$0.00	\$67.80
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 1	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 - PAINTER - Local 35 Zone 1 - BRUSH NEW**

**Effective Date - 07/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.93	\$7.85	\$0.00	\$0.00	\$29.78
2	55	\$24.12	\$7.85	\$3.66	\$0.00	\$35.63
3	60	\$26.31	\$7.85	\$3.99	\$0.00	\$38.15
4	65	\$28.50	\$7.85	\$4.32	\$0.00	\$40.67
5	70	\$30.70	\$7.85	\$14.11	\$0.00	\$52.66
6	75	\$32.89	\$7.85	\$14.44	\$0.00	\$55.18
7	80	\$35.08	\$7.85	\$14.77	\$0.00	\$57.70
8	90	\$39.47	\$7.85	\$15.44	\$0.00	\$62.76

**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

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

PAINTER / TAPER (BRUSH, REPAINT)	07/01/2015	\$41.91	\$7.85	\$16.10	\$0.00	\$65.86
PAINTERS LOCAL 35 - ZONE 1	01/01/2016	\$42.86	\$7.85	\$16.10	\$0.00	\$66.81
	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

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - PAINTER Local 35 Zone 1 - BRUSH REPAINT**

**Effective Date - 07/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.96	\$7.85	\$0.00	\$0.00	\$28.81
2	55	\$23.05	\$7.85	\$3.66	\$0.00	\$34.56
3	60	\$25.15	\$7.85	\$3.99	\$0.00	\$36.99
4	65	\$27.24	\$7.85	\$4.32	\$0.00	\$39.41
5	70	\$29.34	\$7.85	\$14.11	\$0.00	\$51.30
6	75	\$31.43	\$7.85	\$14.44	\$0.00	\$53.72
7	80	\$33.53	\$7.85	\$14.77	\$0.00	\$56.15
8	90	\$37.72	\$7.85	\$15.44	\$0.00	\$61.01

**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

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

PANEL & PICKUP TRUCKS DRIVER <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	08/01/2015	\$32.58	\$10.41	\$9.33	\$0.00	\$52.32
	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	\$19.59	\$0.00	\$50.41
2	60	\$25.22	\$9.80	\$19.59	\$0.00	\$54.61
3	70	\$29.43	\$9.80	\$19.59	\$0.00	\$58.82
4	75	\$31.53	\$9.80	\$19.59	\$0.00	\$60.92
5	80	\$33.63	\$9.80	\$19.59	\$0.00	\$63.02
6	80	\$33.63	\$9.80	\$19.59	\$0.00	\$63.02
7	90	\$37.84	\$9.80	\$19.59	\$0.00	\$67.23
8	90	\$37.84	\$9.80	\$19.59	\$0.00	\$67.23

**Notes:**

**Apprentice to Journeyworker Ratio:1:3**

PIPEFITTER & STEAMFITTER PIPEFITTERS LOCAL 537	03/01/2015	\$48.69	\$9.70	\$16.89	\$0.00	\$75.28
	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

**Apprentice - PIPEFITTER - Local 537**

**Effective Date - 03/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.48	\$9.70	\$7.50	\$0.00	\$36.68
2	45	\$21.91	\$9.70	\$16.89	\$0.00	\$48.50
3	60	\$29.21	\$9.70	\$16.89	\$0.00	\$55.80
4	70	\$34.08	\$9.70	\$16.89	\$0.00	\$60.67
5	80	\$38.95	\$9.70	\$16.89	\$0.00	\$65.54

**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

**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>	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

PLUMBERS & GASFITTERS <i>PLUMBERS &amp; GASFITTERS LOCAL 12</i>	03/01/2015	\$50.21	\$10.32	\$14.89	\$0.00	\$75.42
	09/01/2015	\$51.21	\$10.32	\$14.89	\$0.00	\$76.42
	03/01/2016	\$52.36	\$10.32	\$14.89	\$0.00	\$77.57
	09/01/2016	\$53.41	\$10.32	\$14.89	\$0.00	\$78.62
	03/01/2017	\$54.41	\$10.32	\$14.89	\$0.00	\$79.62

**Apprentice - PLUMBER/GASFITTER - Local 12**

**Effective Date - 03/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.57	\$10.32	\$5.54	\$0.00	\$33.43
2	40	\$20.08	\$10.32	\$6.27	\$0.00	\$36.67
3	55	\$27.62	\$10.32	\$8.42	\$0.00	\$46.36
4	65	\$32.64	\$10.32	\$9.87	\$0.00	\$52.83
5	75	\$37.66	\$10.32	\$11.30	\$0.00	\$59.28

**Effective Date - 09/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$17.92	\$10.32	\$5.54	\$0.00	\$33.78
2	40	\$20.48	\$10.32	\$6.27	\$0.00	\$37.07
3	55	\$28.17	\$10.32	\$8.42	\$0.00	\$46.91
4	65	\$33.29	\$10.32	\$9.87	\$0.00	\$53.48
5	75	\$38.41	\$10.32	\$11.30	\$0.00	\$60.03

**Notes:**

\*\* 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr  
Step4 with lic\$56.05 Step5 with lic\$62.48

**Apprentice to Journeyworker Ratio:\*\***

PNEUMATIC CONTROLS (TEMP.) <i>PIPEFITTERS LOCAL 537</i>	03/01/2015	\$48.69	\$9.70	\$16.89	\$0.00	\$75.28
	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>	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
POWDERMAN & BLASTER <i>LABORERS - ZONE 1</i>	06/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	12/01/2015	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	06/01/2016	\$37.60	\$7.30	\$13.20	\$0.00	\$58.10
	12/01/2016	\$38.60	\$7.30	\$13.20	\$0.00	\$59.10
For apprentice rates see "Apprentice- LABORER"						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.83	\$10.00	\$14.55	\$0.00	\$67.38
	12/01/2015	\$44.08	\$10.00	\$14.55	\$0.00	\$68.63
	06/01/2016	\$44.83	\$10.00	\$14.55	\$0.00	\$69.38
	12/01/2016	\$46.08	\$10.00	\$14.55	\$0.00	\$70.63
	06/01/2017	\$47.08	\$10.00	\$14.55	\$0.00	\$71.63
	12/01/2017	\$48.08	\$10.00	\$14.55	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.83	\$10.00	\$14.55	\$0.00	\$67.38
	12/01/2015	\$44.08	\$10.00	\$14.55	\$0.00	\$68.63
	06/01/2016	\$44.83	\$10.00	\$14.55	\$0.00	\$69.38
	12/01/2016	\$46.08	\$10.00	\$14.55	\$0.00	\$70.63
	06/01/2017	\$47.08	\$10.00	\$14.55	\$0.00	\$71.63
	12/01/2017	\$48.08	\$10.00	\$14.55	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$29.61	\$10.00	\$14.55	\$0.00	\$54.16
	12/01/2015	\$30.48	\$10.00	\$14.55	\$0.00	\$55.03
	06/01/2016	\$31.00	\$10.00	\$14.55	\$0.00	\$55.55
	12/01/2016	\$31.87	\$10.00	\$14.55	\$0.00	\$56.42
	06/01/2017	\$32.56	\$10.00	\$14.55	\$0.00	\$57.11
	12/01/2017	\$33.25	\$10.00	\$14.55	\$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>	06/01/2015	\$42.42	\$10.00	\$14.55	\$0.00	\$66.97
	12/01/2015	\$43.66	\$10.00	\$14.55	\$0.00	\$68.21
	06/01/2016	\$44.41	\$10.00	\$14.55	\$0.00	\$68.96
	12/01/2016	\$45.64	\$10.00	\$14.55	\$0.00	\$70.19
	06/01/2017	\$46.63	\$10.00	\$14.55	\$0.00	\$71.18
	12/01/2017	\$47.62	\$10.00	\$14.55	\$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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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

**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>	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35

For apprentice rates see "Apprentice- LABORER"

ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.42	\$10.00	\$14.55	\$0.00	\$66.97
	12/01/2015	\$43.66	\$10.00	\$14.55	\$0.00	\$68.21
	06/01/2016	\$44.41	\$10.00	\$14.55	\$0.00	\$68.96
	12/01/2016	\$45.64	\$10.00	\$14.55	\$0.00	\$70.19
	06/01/2017	\$46.63	\$10.00	\$14.55	\$0.00	\$71.18
	12/01/2017	\$47.62	\$10.00	\$14.55	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

ROOFER (Inc.Roofing Waterproofing &Roofing Damproofing) <i>ROOFERS LOCAL 33</i>	08/01/2015	\$40.11	\$11.00	\$12.00	\$0.00	\$63.11
	02/01/2016	\$41.01	\$11.00	\$12.00	\$0.00	\$64.01

**Classification**

**Effective Date    Base Wage    Health    Pension    Supplemental Unemployment    Total Rate**

**Apprentice - ROOFER - Local 33**

**Effective Date - 08/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.06	\$11.00	\$3.38	\$0.00	\$34.44
2	60	\$24.07	\$11.00	\$12.00	\$0.00	\$47.07
3	65	\$26.07	\$11.00	\$12.00	\$0.00	\$49.07
4	75	\$30.08	\$11.00	\$12.00	\$0.00	\$53.08
5	85	\$34.09	\$11.00	\$12.00	\$0.00	\$57.09

**Effective Date - 02/01/2016**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.51	\$11.00	\$3.38	\$0.00	\$34.89
2	60	\$24.61	\$11.00	\$12.00	\$0.00	\$47.61
3	65	\$26.66	\$11.00	\$12.00	\$0.00	\$49.66
4	75	\$30.76	\$11.00	\$12.00	\$0.00	\$53.76
5	85	\$34.86	\$11.00	\$12.00	\$0.00	\$57.86

**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	08/01/2015	\$40.36	\$11.00	\$12.00	\$0.00	\$63.36
ROOFERS LOCAL 33	02/01/2016	\$41.26	\$11.00	\$12.00	\$0.00	\$64.26
For apprentice rates see "Apprentice- ROOFER"						
SHEETMETAL WORKER	08/01/2015	\$43.31	\$10.20	\$21.48	\$2.25	\$77.24
SHEETMETAL WORKERS LOCAL 17 - A	02/01/2016	\$44.31	\$10.20	\$21.48	\$2.25	\$78.24
	08/01/2016	\$45.46	\$10.20	\$21.48	\$2.25	\$79.39
	02/01/2017	\$46.56	\$10.20	\$21.48	\$2.25	\$80.49
	08/01/2017	\$47.66	\$10.20	\$21.48	\$2.25	\$81.59
	02/01/2018	\$48.81	\$10.20	\$21.48	\$2.25	\$82.74

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

**Apprentice - SHEET METAL WORKER - Local 17-A**

**Effective Date - 08/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.32	\$10.20	\$4.90	\$0.00	\$32.42
2	40	\$17.32	\$10.20	\$4.90	\$0.00	\$32.42
3	45	\$19.49	\$10.20	\$9.59	\$1.18	\$40.46
4	45	\$19.49	\$10.20	\$9.59	\$1.18	\$40.46
5	50	\$21.66	\$10.20	\$10.45	\$1.27	\$43.58
6	50	\$21.66	\$10.20	\$10.70	\$1.28	\$43.84
7	60	\$25.99	\$10.20	\$12.17	\$1.45	\$49.81
8	65	\$28.15	\$10.20	\$13.04	\$1.54	\$52.93
9	75	\$32.48	\$10.20	\$14.76	\$1.72	\$59.16
10	85	\$36.81	\$10.20	\$15.98	\$1.89	\$64.88

**Effective Date - 02/01/2016**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.72	\$10.20	\$4.90	\$0.00	\$32.82
2	40	\$17.72	\$10.20	\$4.90	\$0.00	\$32.82
3	45	\$19.94	\$10.20	\$9.59	\$1.19	\$40.92
4	45	\$19.94	\$10.20	\$9.59	\$1.19	\$40.92
5	50	\$22.16	\$10.20	\$10.45	\$1.28	\$44.09
6	50	\$22.16	\$10.20	\$10.70	\$1.29	\$44.35
7	60	\$26.59	\$10.20	\$12.17	\$1.47	\$50.43
8	65	\$28.80	\$10.20	\$13.04	\$1.56	\$53.60
9	75	\$33.23	\$10.20	\$14.76	\$1.75	\$59.94
10	85	\$37.66	\$10.20	\$15.98	\$1.92	\$65.76

**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>	08/01/2015	\$33.04	\$10.41	\$9.33	\$0.00	\$52.78
	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>	08/01/2015	\$33.33	\$10.41	\$9.33	\$0.00	\$53.07
	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>	03/01/2015	\$54.43	\$8.42	\$14.90	\$0.00	\$77.75
	10/01/2015	\$55.58	\$8.42	\$14.90	\$0.00	\$78.90
	01/01/2016	\$55.58	\$8.67	\$15.05	\$0.00	\$79.30
	03/01/2016	\$56.58	\$8.67	\$15.05	\$0.00	\$80.30
	10/01/2016	\$57.73	\$8.67	\$15.05	\$0.00	\$81.45
	03/01/2017	\$58.73	\$8.67	\$15.05	\$0.00	\$82.45

**Classification**

**Effective Date   Base Wage   Health   Pension   Supplemental Unemployment   Total Rate**

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

**Effective Date - 03/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$19.05	\$8.42	\$8.40	\$0.00	\$35.87
2	40	\$21.77	\$8.42	\$8.40	\$0.00	\$38.59
3	45	\$24.49	\$8.42	\$8.40	\$0.00	\$41.31
4	50	\$27.22	\$8.42	\$8.40	\$0.00	\$44.04
5	55	\$29.94	\$8.42	\$8.40	\$0.00	\$46.76
6	60	\$32.66	\$8.42	\$8.40	\$0.00	\$49.48
7	65	\$35.38	\$8.42	\$8.40	\$0.00	\$52.20
8	70	\$38.10	\$8.42	\$8.40	\$0.00	\$54.92
9	75	\$40.82	\$8.42	\$8.40	\$0.00	\$57.64
10	80	\$43.54	\$8.42	\$8.40	\$0.00	\$60.36

**Effective Date - 10/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$19.45	\$8.42	\$8.40	\$0.00	\$36.27
2	40	\$22.23	\$8.42	\$8.40	\$0.00	\$39.05
3	45	\$25.01	\$8.42	\$8.40	\$0.00	\$41.83
4	50	\$27.79	\$8.42	\$8.40	\$0.00	\$44.61
5	55	\$30.57	\$8.42	\$8.40	\$0.00	\$47.39
6	60	\$33.35	\$8.42	\$8.40	\$0.00	\$50.17
7	65	\$36.13	\$8.42	\$8.40	\$0.00	\$52.95
8	70	\$38.91	\$8.42	\$8.40	\$0.00	\$55.73
9	75	\$41.69	\$8.42	\$8.40	\$0.00	\$58.51
10	80	\$44.46	\$8.42	\$8.40	\$0.00	\$61.28

**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>	06/01/2015	\$42.42	\$10.00	\$14.55	\$0.00	\$66.97
	12/01/2015	\$43.66	\$10.00	\$14.55	\$0.00	\$68.21
	06/01/2016	\$44.41	\$10.00	\$14.55	\$0.00	\$68.96
	12/01/2016	\$45.64	\$10.00	\$14.55	\$0.00	\$70.19
	06/01/2017	\$46.63	\$10.00	\$14.55	\$0.00	\$71.18
	12/01/2017	\$47.62	\$10.00	\$14.55	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.42	\$10.00	\$14.55	\$0.00	\$66.97
	12/01/2015	\$43.66	\$10.00	\$14.55	\$0.00	\$68.21
	06/01/2016	\$44.41	\$10.00	\$14.55	\$0.00	\$68.96
	12/01/2016	\$45.64	\$10.00	\$14.55	\$0.00	\$70.19
	06/01/2017	\$46.63	\$10.00	\$14.55	\$0.00	\$71.18
	12/01/2017	\$47.62	\$10.00	\$14.55	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2015	\$33.88	\$13.00	\$13.70	\$0.00	\$60.58
	09/01/2015	\$34.60	\$13.00	\$13.72	\$0.00	\$61.32
	03/01/2016	\$35.31	\$13.00	\$13.74	\$0.00	\$62.05

**Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103**

**Effective Date - 03/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.55	\$13.00	\$0.41	\$0.00	\$26.96
2	40	\$13.55	\$13.00	\$0.41	\$0.00	\$26.96
3	45	\$15.25	\$13.00	\$10.87	\$0.00	\$39.12
4	45	\$15.25	\$13.00	\$10.87	\$0.00	\$39.12
5	50	\$16.94	\$13.00	\$11.11	\$0.00	\$41.05
6	55	\$18.63	\$13.00	\$11.38	\$0.00	\$43.01
7	60	\$20.33	\$13.00	\$11.64	\$0.00	\$44.97
8	65	\$22.02	\$13.00	\$11.89	\$0.00	\$46.91
9	70	\$23.72	\$13.00	\$12.15	\$0.00	\$48.87
10	75	\$25.41	\$13.00	\$12.41	\$0.00	\$50.82

**Effective Date - 09/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$13.84	\$13.00	\$0.42	\$0.00	\$27.26
2	40	\$13.84	\$13.00	\$0.42	\$0.00	\$27.26
3	45	\$15.57	\$13.00	\$10.88	\$0.00	\$39.45
4	45	\$15.57	\$13.00	\$10.88	\$0.00	\$39.45
5	50	\$17.30	\$13.00	\$11.14	\$0.00	\$41.44
6	55	\$19.03	\$13.00	\$11.39	\$0.00	\$43.42
7	60	\$20.76	\$13.00	\$11.65	\$0.00	\$45.41
8	65	\$22.49	\$13.00	\$11.90	\$0.00	\$47.39
9	70	\$24.22	\$13.00	\$12.17	\$0.00	\$49.39
10	75	\$25.95	\$13.00	\$12.43	\$0.00	\$51.38

**Notes:**

**Apprentice to Journeyworker Ratio:1:1**

TERRAZZO FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	08/01/2015	\$48.80	\$10.18	\$18.57	\$0.00	\$77.55
	02/01/2016	\$49.37	\$10.18	\$18.57	\$0.00	\$78.12
	08/01/2016	\$50.27	\$10.18	\$18.65	\$0.00	\$79.10
	02/01/2017	\$50.84	\$10.18	\$18.65	\$0.00	\$79.67

**Classification**

**Effective Date    Base Wage    Health    Pension    Supplemental Unemployment    Total Rate**

**Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile**

**Effective Date - 08/01/2015**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.40	\$10.18	\$18.57	\$0.00	\$53.15
2	60	\$29.28	\$10.18	\$18.57	\$0.00	\$58.03
3	70	\$34.16	\$10.18	\$18.57	\$0.00	\$62.91
4	80	\$39.04	\$10.18	\$18.57	\$0.00	\$67.79
5	90	\$43.92	\$10.18	\$18.57	\$0.00	\$72.67

**Effective Date - 02/01/2016**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.69	\$10.18	\$18.57	\$0.00	\$53.44
2	60	\$29.62	\$10.18	\$18.57	\$0.00	\$58.37
3	70	\$34.56	\$10.18	\$18.57	\$0.00	\$63.31
4	80	\$39.50	\$10.18	\$18.57	\$0.00	\$68.25
5	90	\$44.43	\$10.18	\$18.57	\$0.00	\$73.18

**Notes:**

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**Apprentice to Journeyworker Ratio:1:3**

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2015	\$36.45	\$7.30	\$13.40	\$0.00	\$57.15
	12/01/2015	\$37.20	\$7.30	\$13.40	\$0.00	\$57.90
	06/01/2016	\$37.95	\$7.30	\$13.40	\$0.00	\$58.65
	12/01/2016	\$38.95	\$7.30	\$13.40	\$0.00	\$59.65

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2015	\$35.17	\$7.30	\$13.40	\$0.00	\$55.87
	12/01/2015	\$35.92	\$7.30	\$13.40	\$0.00	\$56.62
	06/01/2016	\$36.67	\$7.30	\$13.40	\$0.00	\$57.37
	12/01/2016	\$37.67	\$7.30	\$13.40	\$0.00	\$58.37

For apprentice rates see "Apprentice- LABORER"

TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2015	\$35.05	\$7.30	\$13.40	\$0.00	\$55.75
	12/01/2015	\$35.80	\$7.30	\$13.40	\$0.00	\$56.50
	06/01/2016	\$36.55	\$7.30	\$13.40	\$0.00	\$57.25
	12/01/2016	\$37.55	\$7.30	\$13.40	\$0.00	\$58.25

For apprentice rates see "Apprentice- LABORER"

TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.42	\$10.00	\$14.55	\$0.00	\$66.97
	12/01/2015	\$43.66	\$10.00	\$14.55	\$0.00	\$68.21
	06/01/2016	\$44.41	\$10.00	\$14.55	\$0.00	\$68.96
	12/01/2016	\$45.64	\$10.00	\$14.55	\$0.00	\$70.19
	06/01/2017	\$46.63	\$10.00	\$14.55	\$0.00	\$71.18
	12/01/2017	\$47.62	\$10.00	\$14.55	\$0.00	\$72.17

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	08/01/2015	\$33.62	\$10.41	\$9.33	\$0.00	\$53.36
	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
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	06/01/2015	\$47.33	\$7.30	\$13.80	\$0.00	\$68.43
	12/01/2015	\$48.08	\$7.30	\$13.80	\$0.00	\$69.18
	06/01/2016	\$48.83	\$7.30	\$13.80	\$0.00	\$69.93
	12/01/2016	\$49.83	\$7.30	\$13.80	\$0.00	\$70.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	06/01/2015	\$49.33	\$7.30	\$13.80	\$0.00	\$70.43
	12/01/2015	\$50.08	\$7.30	\$13.80	\$0.00	\$71.18
	06/01/2016	\$50.83	\$7.30	\$13.80	\$0.00	\$71.93
	12/01/2016	\$51.83	\$7.30	\$13.80	\$0.00	\$72.93
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	06/01/2015	\$39.40	\$7.30	\$13.80	\$0.00	\$60.50
	12/01/2015	\$40.15	\$7.30	\$13.80	\$0.00	\$61.25
	06/01/2016	\$40.90	\$7.30	\$13.80	\$0.00	\$62.00
	12/01/2016	\$41.90	\$7.30	\$13.80	\$0.00	\$63.00
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	06/01/2015	\$41.40	\$7.30	\$13.80	\$0.00	\$62.50
	12/01/2015	\$42.15	\$7.30	\$13.80	\$0.00	\$63.25
	06/01/2016	\$42.90	\$7.30	\$13.80	\$0.00	\$64.00
	12/01/2016	\$43.90	\$7.30	\$13.80	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	08/01/2015	\$33.04	\$10.41	\$9.33	\$0.00	\$52.78
	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>	06/01/2015	\$35.35	\$7.30	\$13.20	\$0.00	\$55.85
	12/01/2015	\$36.10	\$7.30	\$13.20	\$0.00	\$56.60
	06/01/2016	\$36.85	\$7.30	\$13.20	\$0.00	\$57.35
	12/01/2016	\$37.85	\$7.30	\$13.20	\$0.00	\$58.35
For apprentice rates see "Apprentice- LABORER"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2015	\$42.83	\$10.00	\$14.55	\$0.00	\$67.38
	12/01/2015	\$44.08	\$10.00	\$14.55	\$0.00	\$68.63
	06/01/2016	\$44.83	\$10.00	\$14.55	\$0.00	\$69.38
	12/01/2016	\$46.08	\$10.00	\$14.55	\$0.00	\$70.63
	06/01/2017	\$47.08	\$10.00	\$14.55	\$0.00	\$71.63
	12/01/2017	\$48.08	\$10.00	\$14.55	\$0.00	\$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS &amp; GASFITTERS LOCAL 12</i>	03/01/2015	\$50.21	\$10.32	\$14.89	\$0.00	\$75.42
	09/01/2015	\$51.21	\$10.32	\$14.89	\$0.00	\$76.42
	03/01/2016	\$52.36	\$10.32	\$14.89	\$0.00	\$77.57
	09/01/2016	\$53.41	\$10.32	\$14.89	\$0.00	\$78.62
	03/01/2017	\$54.41	\$10.32	\$14.89	\$0.00	\$79.62

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
<b>Outside Electrical - East</b>						
CABLE TECHNICIAN (Power Zone) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$25.66	\$8.70	\$4.48	\$0.00	\$38.84
For apprentice rates see "Apprentice- LINEMAN"						
CABLEMAN (Underground Ducts & Cables) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$36.55	\$8.70	\$6.58	\$0.00	\$51.83
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN CDL <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$29.94	\$8.70	\$6.05	\$0.00	\$44.69
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$23.52	\$8.70	\$5.24	\$0.00	\$37.46
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class A CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$36.35	\$8.70	\$9.43	\$0.00	\$54.48
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class B CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$32.08	\$8.70	\$6.59	\$0.00	\$47.37
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$23.52	\$8.70	\$3.72	\$0.00	\$35.94
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN -Inexperienced (<2000 Hrs.) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$19.25	\$8.70	\$2.85	\$0.00	\$30.80
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/01/2013	\$42.77	\$8.70	\$11.78	\$0.00	\$63.25

**Apprentice - LINEMAN (Outside Electrical) - East Local 104**

**Effective Date - 09/01/2013**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$25.66	\$8.70	\$4.24	\$0.00	\$38.60
2	65	\$27.80	\$8.70	\$4.71	\$0.00	\$41.21
3	70	\$29.94	\$8.70	\$5.43	\$0.00	\$44.07
4	75	\$32.08	\$8.70	\$6.16	\$0.00	\$46.94
5	80	\$34.22	\$8.70	\$6.88	\$0.00	\$49.80
6	85	\$36.35	\$8.70	\$7.62	\$0.00	\$52.67
7	90	\$38.49	\$8.70	\$8.83	\$0.00	\$56.02

**Notes:**

**Apprentice to Journeyworker Ratio:1:2**

TELEDATA CABLE SPLICER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/01/2015	\$28.12	\$4.25	\$3.09	\$0.00	\$35.46
	01/01/2016	\$28.98	\$4.25	\$3.12	\$0.00	\$36.35
TELEDATA LINEMAN/EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/01/2015	\$26.49	\$4.25	\$3.04	\$0.00	\$33.78
	01/01/2016	\$27.31	\$4.25	\$3.07	\$0.00	\$34.63

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TELEDATA WIREMAN/INSTALLER/TECHNICIAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	01/01/2015	\$26.49	\$4.25	\$3.04	\$0.00	\$33.78
	01/01/2016	\$27.31	\$4.25	\$3.07	\$0.00	\$34.63
TREE TRIMMER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/01/2015	\$18.05	\$3.55	\$0.00	\$0.00	\$21.60
	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 <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/01/2015	\$15.92	\$3.55	\$0.00	\$0.00	\$19.47
	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.

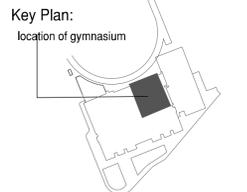
All steps are six months (1000 hours.)

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.



**ABBREVIATIONS**

A		I, J, K, L (NOT USED)
AVC	AIR CONDITION	
AD	AREA DRAIN	
AFF	ABOVE FINISHED FLOOR	
AHU	AIR HANDLING UNIT	
ALUM	ALUMINUM	
B		
BOS	BOTTOM OF STEEL	
C		
c	CELSIUS	
CG	CORNER GUARD	
CJ	CONSTRUCTION JOINT; CONTROL JOINT	
CL	CENTERLINE	
CLO	CLOSET	
CMU	CONCRETE MASONRY UNIT	
CONC	CONCRETE	
COOR	CORRIDOR	
CUH	CABINET UNIT HEATER	
D		
D	DEEP	
DEMO	DEMOLITION	
DF	DRINKING FOUNTAIN	
DIA	DIAMETER	
DR	DOOR	
E		
EJ	EXPANSION JOINT	
EL	ELEVATION	
EOS	EDGE OF SLAB	
EQ	EQUAL	
ERD	EXISTING ROOF DRAIN	
EWC	ELECTRIC WATER COOLER	
EXIST	EXISTING	
EXP	EXPOSED	
EXT	EXTERIOR	
F		
F	FAHRENHEIT	
FA	FIRE ALARM	
FACP	FIRE ALARM CONTROL PANEL	
FEC	FIRE EXTINGUISHER CABINET	
FD	FLOOR DRAIN	
FDC	FIRE DEPARTMENT CONNECTION	
FE	FIRE EXTINGUISHER	
FEC	FIRE EXTINGUISHER CABINET	
FHC	FIRE HOSE CABINET	
FIN	FINISH	
FO	FINISHED OPENING	
FOC	FACE OF CONCRETE	
FOM	FACE OF MASONRY	
FOS	FACE OF STUD	
FOW	FACE OF WALL	
G		
GL	GLASS	
GWB	GYPSUM (WALL) BOARD	
H		
H	HIGH	
HB	HOSE BIBB	
HM	HOLLOW METAL	
HR	HOUR	
HT	HEIGHT	
M		
MACH RM	MACHINE ROOM	
MAX	MAXIMUM	
MIN	MINIMUM	
MIN	MINUTE	
MO	MASONRY OPENING	
N		
NA	NOT APPLICABLE	
NIC	NOT IN CONTRACT	
NOM	NOMINAL	
NTS	NOT TO SCALE	
O		
OC	ON CENTER	
OD	OUTSIDE DIAMETER; OUTSIDE DIMENSION	
OPH	OPPOSITE HAND	
ORIG	ORIGINAL	
P		
PLAS	PLASTER	
PVC	POLYVINYL CHLORIDE	
Q (NOT USED)		
R		
R	RADIUS; RISER	
RCP	REFLECTED CEILING PLAN	
RD	ROOF DRAIN	
REST	RESTROOM	
RM	ROOM	
RO	ROUGH OPENING	
RTU	ROOF TOP UNIT	
S		
SD	SMOKE DETECTOR	
SECT	SECTION	
SIM	SIMILAR	
SST	STAINLESS STEEL	
T		
T	TREAD	
TEMP	TEMPORARY	
TOC	TOP OF CONCRETE	
TOM	TOP OF MASONRY	
TOP	TOP OF PARAPET	
TOS	TOP OF SLAB; TOP OF STEEL	
TOW	TOP OF WALL	
TYP	TYPICAL	
U		
UL	UNDERWRITERS' LABORATORIES	
UON	UNLESS OTHERWISE NOTED	
V		
VEST	VESTIBULE	
VIF	VERIFY IN FIELD	
W		
W	WIDE	
WD	WOOD	
WH	WALL HYDRANT	
WP	WORKING POINT	
X,Y,Z (NOT USED)		

THE PRECEDING LIST OF ABBREVIATIONS IS PRESENTED AS A GENERAL GUIDE AND DOES NOT NECESSARILY SHOW ALL ABBREVIATIONS USED. OTHER GENERALLY ACCEPTED ABBREVIATIONS MAY BE FOUND AMONG THE DRAWINGS - REFER TO NCS FOR DEFINITIONS. ALL ABBREVIATIONS SHOWN ABOVE MAY NOT BE USED WITHIN THIS DRAWING SET.

**SYMBOLS**

	NORTH ARROW PLAN NORTH BOLD, TRUE NORTH LINE
	GRAPHIC SCALE 1/8"=1'-0"
	DRAWING TITLE 2 View Name A101 SCALE: 1/8" = 1'-0"
	SPOT ELEVATION TAG EL. 18'-0"
	GRID LINE
	GRID LINE BUBBLE & NUMBER A.1 B.2
	FIRE RESISTIVE RATED LINE 1 HOUR
	FIRE RESISTIVE RATED LINE 2 HOUR
	EXISTING WALL TO REMAIN
	WALL TO BE DEMOLISHED
	NEW WALL
	DIMENSION LINES 2'-6"
	DETAIL SECTION TAG 1 A2222
	INTERIOR ELEVATION TAG 1 A2222 2 A2222 3 4
	DOOR REFERENCE TAG 2222A
	ROOM OR AREA NAME & NUMBER TAG ROOM NAME 2222
	WALL AND PARTITION TYPE INDICATOR TAG XX XX XX XB
	DETAIL REFERENCE TAG 1 A2222
	DETAIL REFERENCE BUBBLE 22
	KEYNOTE INDICATOR TAG 124
	FURNITURE, FIXTURE & EQUIPMENT TAG FLOOR EL. 18'-0"
	VERTICAL ELEVATION
	LEADER LINES LABEL
	CENTER LINE SYMBOL
	BREAK LINE
	REVISION DELTA REFERENCE TAG 22
	REVISION CLOUD



**CODE SUMMARY**

1. PROJECT DESCRIPTION: REPLACE EXISTING DOWNLIGHTS IN AUXILIARY GYMNASIUM WITH NEW ROUGH SERVICE PENDANT LIGHTS AS PART OF THIS PROJECT. THE GENERAL CONTRACTOR SHALL REMOVE THE EXISTING CEILING GRID AND PAINT ALL SURFACES ON CEILING EXISTING SCONCES SHALL BE REPLACED AS ADD ALTERNATE TO THE BASE PROJECT OF CEILING REMOVAL AND CEILING LIGHT REPLACEMENT
2. APPLICABLE CODES: MASSACHUSETTS STATE BUILDING CODE - 8TH EDITION 780 CMR AND 521 CMR (ACCESS BOARD)
3. AREA OF WORK PROPOSED: ONLY THE CEILING WILL BE RENOVATED
4. OCCUPANCY GROUP(S): ASSEMBLY USE INCIDENTAL TO EDUCATIONAL USE
5. PROPOSED OCCUPANCY: SAME AS EXISTING
6. OCCUPANCY LOAD / PERSON: 100 GROSS SQUARE FEET PER PERSON
7. NUMBER OF EXITS: 2
8. TRAVEL DISTANCE TO NEAREST EXIT: LESS THAN 50 FEET

**DRAWING LIST**

SHEET #:	DRAWING TITLE:
A-001	COVER SHEET
A-002	ARCHITECTURAL SPECIFICATIONS
AD-100	REFLECTED CEILING PLAN DEMOLITION
E-001	ELECTRICAL SYMBOLS, ABBREVIATIONS AND SCHEDULE
E-002	ELECTRICAL - SPECIFICATIONS
ED-101	ELECTRICAL - LEVEL 2 DEMOLITION LIGHTING PLAN
E-102	ELECTRICAL - LEVEL 2 LIGHTING PLAN
E-801	ELECTRICAL DETAILS AND SCHEDULE

## GENERAL NOTES

### 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 (1/4) (OR 1/4) OR OTHER SIMILAR NOTES ON THE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR VERIFYING ALL CONDITIONS AS DESCRIBED ABOVE.

### SECTION 01100 - 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

- GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND OTHER DIVISION 1 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.
- 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.

- PROJECT IDENTIFICATION: PROJECT CONSISTS OF REPLACEMENT OF EXISTING BOILERS AT CHELSEA HIGH SCHOOL.
  - PROJECT LOCATION: CHELSEA HIGH SCHOOL, 299 EVERETT AVE., CHELSEA MASSACHUSETTS, 02150.
  - 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, 02101.
- C. CONSTRUCTION MANAGER: CONSTRUCTION MANAGER FOR THIS PROJECT SHALL BE SUBJECTS CONTRACTOR. IN DIVISIONS 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:

- REMOVAL OF THE CEILING GRID SYSTEM
- REMOVE AND SALVE EXISTING LIGHT FIXTURES
- 

PROJECT WILL BE CONSTRUCTED UNDER A GENERAL CONSTRUCTION CONTRACT WITH THE ELECTRICAL CONTRACTOR ACTING AS THE GENERAL CONTRACTOR.

#### 1.4 WORK SEQUENCE AND SCHEDULE

- 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.
- CONTRACTOR SHALL SUBMIT A SCHEDULE FOR EACH PHASE OF THE WORK INDICATING SCHEDULED COMPLETION OF WORK AND IDENTIFYING THESE INTERMEDIATE MILESTONES:
  - START OF PROJECT CONSTRUCTION
  - START OF SUBMITTALS
  - DELIVERY OF MAJOR EQUIPMENT
  - COMPLETION OF NEW INSTALLATIONS
  - TESTING AND COMMISSIONING
  - PROJECT COMPLETION/CLOSEOUT
- THE CONSTRUCTION SCHEDULE SHALL REFLECT THESE MILESTONE DATES:
  - CONSTRUCTION SITE STAGING
  - EQUIPMENT DELIVERY SCHEDULE
  - START OF DEMOLITION AND CONSTRUCTION ACTIVITY
  - COMPLETION OF NEW INSTALLATION
  - COMPLETION OF COOLING SYSTEM WORK
  - 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 DUMPSITE SEPARATE FROM THE SCHOOL'S DUMPSITE.

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 ITS OWN ENGINEER TO CERTIFY THAT ANY RIGGING OR STAGING OPERATION ON TOP OF EXISTING GYMNASIUM FLOOR IS ALSO IN 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 BALL FIELDS OR OTHER FIELDS, 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

- SPECIFICATION FORMAT: THE SPECIFICATIONS ARE ORGANIZED INTO DIVISIONS AND SECTIONS USING THE 26-DIVISION FORMAT AND CSI/CSCS 'MASTERFORMAT' NUMBERING SYSTEM.
- 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:
  - 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.

- 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.
  - 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

- 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.
- SUBMITTALS SHALL BE IN A BOUND FORMAT, WITH A TITLE PAGE INDICATING THE PROJECT IDENTIFICATION, SUBMITTAL TITLE AND SPECIFICATION REFERENCE.
- SUBMITTALS SHALL BE MADE TO EXPEDITE MATERIAL AND EQUIPMENT DELIVERY. NO CLAIM FOR DELAY WILL BE ENTERAINED DUE TO DRAWING SUBMITTAL REVIEW.
- 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 01100

### SECTION 01550 - HOT WORK

## ARCHITECTURAL SPECIFICATIONS (CONT.)

### PART 1 - GENERAL

#### 1.1 DESCRIPTION OF WORK

A. WORK INCLUDED: THIS SECTION SPECIFIES 'HOT WORK' FIRE CONTROL PROCEDURES FOR CONTRACTORS AND THEIR PERSONNEL, INCLUDING CUTTERS, WELDERS AND OPERATORS OF HEATING EQUIPMENT. HOT WORK IS ANY WORK THAT UTILIZES OR PRODUCES AN IGNITION SOURCE.

#### 1.2 SUBMITTALS

- PERFORM 'HOT WORK' OPERATIONS AS FOLLOWS:
  - ENSURE THE SAFE HANDLING OF 'HOT WORK' EQUIPMENT AND THE SAFE USE OF THE PARTICULAR 'HOT WORK' PROCESS.
  - DETERMINE THE COMBUSTIBLE MATERIALS AND HAZARDOUS AREAS PRESENT OR LIKELY TO BE PRESENT IN THE WORK LOCATIONS.
  - PROTECT COMBUSTIBLES FROM IGNITION.
- ENSURE THE WORKER HANDLES THE 'HOT WORK' EQUIPMENT SAFELY AND USES IT SO AS NOT TO ENDANGER LIVES OR PROPERTY AND:
  - HAS THE APPROVAL OF HIS OR HER SUPERVISOR AND THE CHELSEA PUBLIC SCHOOLS PROJECT OFFICE BEFORE STARTING ANY 'HOT WORK';
  - DOES NOT PERFORM ANY 'HOT WORK' WHERE CONDITIONS ARE NOT SAFE;
  - CONTINUES TO PERFORM 'HOT WORK' ONLY SO LONG AS CONDITIONS ARE UNCHANGED FROM THOSE
  - UNDER WHICH APPROVAL WAS GRANTED.

#### 1.3 FIRE PREVENTION PRECAUTIONS

- PERMIT 'HOT WORK' ONLY IN AREAS THAT ARE OR HAVE BEEN MADE FIRE-SAFE.
- WHEN WORK CANNOT BE MOVED PRACTICABLY, AS IN MOST CASES FOR HOT WORK, MAKE THE AREA FIRE-SAFE BY REMOVING COMBUSTIBLES OR PROTECTING COMBUSTIBLES FROM IGNITION SOURCES.
- BEFORE 'HOT WORK' IS PERMITTED, THE ENGINEER WILL GIVE NOTIFICATION AUTHORIZING THE 'HOT WORK', AND DESIGNATE PRECAUTIONS TO BE FOLLOWED. HE WILL HAVE DESIGNATED CHELSEA PUBLIC SCHOOLS PERSONNEL INSPECT THE WORK AREA FOR FIRE SAFETY, AS INDICATED HEREIN, AND WHICH PERSONNEL WILL COMPLETE A 'HOT WORK' CHECKLIST. THE ENGINEER WILL ALSO ASSURE HIMSELF OF THE FOLLOWING:
  - THE 'HOT WORK' EQUIPMENT TO BE USED IS IN SATISFACTORY OPERATING CONDITION AND IN GOOD REPAIR.
  - WHERE THERE ARE COMBUSTIBLE MATERIALS SUCH AS PAPER CLIPPINGS, WOOD SHAVINGS OR TEXTILE FIBERS ON THE FLOOR, SWEEP THE FLOOR CLEAN FOR A RADIUS OF 35 FEET. KEEP COMBUSTIBLE FLOORS WET, COVERED WITH DAMP SAND, OR PROTECTED BY FIRE RESISTANT SHIELDS. WHERE FLOORS HAVE BEEN WET DOWN, PROTECT PERSONNEL OPERATING ARC WELDING OR CUTTING EQUIPMENT FROM POSSIBLE SHOCK.
  - WHERE PRACTICABLE, RELOCATE COMBUSTIBLES AT LEAST 35 FEET FROM THE WORK SITE. WHERE RELOCATION IS IMPRACTICABLE, PROTECT COMBUSTIBLES WITH FLAME PROOFED COVERS OR OTHERWISE SHIELD WITH METAL OR FIRE RESISTANT GUARDS OR CURTAINS. SECURE EDGES OF COVERS AT THE FLOOR SO THEY ARE TIGHT TO PREVENT SPARKS FROM COMING UNDER THEM. THIS PRECAUTION IS ALSO IMPORTANT AT OVERLAPS WHERE SEVERAL COVERS ARE USED TO PROTECT A LARGE PILE.
  - TIGHTLY COVER WALL OR FLOOR OPENINGS OR CRACKS WITHIN 35 FEET OF THE SITE TO PREVENT THE PASSAGE OF SPARKS TO ADJACENT AREAS.
  - SUITABLY PROTECT OR SHUT DOWN DUCTS AND CONVEYOR SYSTEMS THAT MIGHT CARRY SPARKS TO DISTANT COMBUSTIBLES.
  - WHERE 'HOT WORK' IS DONE NEAR WALLS, PARTITIONS, CEILINGS OR ROOFS, OR COMBUSTIBLE CONSTRUCTION, PROVIDE FIRE RESISTANT SHIELDS OR GUARDS TO PREVENT IGNITION. IF WELDING IS TO BE DONE ON A METAL WALL, PARTITION, CEILING OR ROOF, TAKE PRECAUTIONS TO PREVENT IGNITION OF COMBUSTIBLES ON THE OTHER SIDE, DUE TO CONDUCTION OF OR RADIATION, PREFERABLY BY RELINQUISHING COMBUSTIBLES WHERE COMBUSTIBLES ARE NOT RELOCATED, PROVIDE A FIRE WATCH ON THE OPPOSITE SIDE OF THE WORK. DO NOT ATTEMPT WELDING ON A METAL PARTITION, WALL, CEILING OR ROOF HAVING A COMBUSTIBLE COVERING, NOR ON WALLS OR PARTITIONS OF COMBUSTIBLE SANDWICH TYPE PANEL CONSTRUCTION.
  - SUITABLY PROTECT OR SHUT DOWN DUCTS AND CONVEYOR SYSTEMS THAT MIGHT CARRY SPARKS TO DISTANT COMBUSTIBLES.
  - WHERE 'HOT WORK' IS DONE NEAR WALLS, PARTITIONS, CEILINGS OR ROOFS, OR COMBUSTIBLE CONSTRUCTION, PROVIDE FIRE RESISTANT SHIELDS OR GUARDS TO PREVENT IGNITION. IF WELDING IS TO BE DONE ON A METAL WALL, PARTITION, CEILING OR ROOF, TAKE PRECAUTIONS TO PREVENT IGNITION OF COMBUSTIBLES ON THE OTHER SIDE, DUE TO CONDUCTION OF OR RADIATION, PREFERABLY BY RELINQUISHING COMBUSTIBLES WHERE COMBUSTIBLES ARE NOT RELOCATED, PROVIDE A FIRE WATCH ON THE OPPOSITE SIDE OF THE WORK. DO NOT ATTEMPT WELDING ON A METAL PARTITION, WALL, CEILING OR ROOF HAVING A COMBUSTIBLE COVERING, NOR ON WALLS OR PARTITIONS OF COMBUSTIBLE SANDWICH TYPE PANEL CONSTRUCTION.
  - SUITABLY PROTECT NEARBY PERSONNEL AGAINST HEAT, SPARKS, SLAG, ETC.

D. REQUIRE THE SERVICES OF FIRE WATCHERS WHENEVER 'HOT WORK' IS PERFORMED IN LOCATIONS WHERE OTHER THAN A MINOR FIRE MIGHT DEVELOP, OR WHERE THE FOLLOWING CONDITIONS EXIST:

- APPRECIABLE COMBUSTIBLE MATERIAL IN THE BUILDING CONSTRUCTION OR CONTENTS IS CLOSER THAN 35 FEET TO THE POINT OF OPERATION.
- APPRECIABLE COMBUSTIBLES ARE MORE THAN 35 FEET AWAY, BUT ARE EASILY IGNITED BY SPARKS.
- WALL OR FLOOR OPENINGS WITHIN A 35 FOOT RADIUS EXPOSE COMBUSTIBLE MATERIAL IN ADJACENT AREAS INCLUDING CONCEALED SPACES IN WALLS OR FLOORS.
- COMBUSTIBLE MATERIALS ARE ADJACENT TO THE OPPOSITE SIDE OF METAL PARTITIONS, WALLS, CEILINGS OR ROOFS, AND ARE LIKELY TO BE IGNITED BY CONDUCTION OR RADIATION.

#### E. FIRE WATCHER'S RESPONSIBILITIES INCLUDE:

- HAVE FIRE EXTINGUISHING EQUIPMENT READILY AVAILABLE AND BE TRAINED IN ITS USE.
- BE FAMILIAR WITH FACILITIES FOR SOUNDING AN ALARM IN THE EVENT OF FIRE.
- WATCH FOR FIRES IN EXPOSED AREAS, AND TRY TO EXTINGUISH THEM ONLY WHEN OBVIOUSLY WITHIN THE CAPACITY OF THE EQUIPMENT AVAILABLE, OR OTHERWISE SOUND THE ALARM.
- MAINTAIN A FIRE WATCH FOR AT LEAST ONE HALF HOUR AFTER COMPLETION OF 'HOT WORK' OPERATIONS TO DETECT AND EXTINGUISH POSSIBLE SMOLDERING FIRES.

F. WHERE A FIRE WATCH IS NOT REQUIRED, MAKE A FINAL CHECK UP ONE HALF HOUR AFTER THE COMPLETION OF 'HOT WORK' OPERATIONS TO DETECT AND EXTINGUISH POSSIBLE SMOLDERING FIRES.

G. HAVE 'HOT TAPPING' OPERATIONS OR OTHER CUTTING OR WELDING ON A FLAMMABLE GAS OR LIQUID TRANSMISSION OR DISTRIBUTION UTILITY PIPELINE PERFORMED ONLY BY A CREW QUALIFIED TO MAKE HOT TAPS.

H. LIMIT THE AMOUNT OF COMBUSTIBLES IN THE CONSTRUCTION AREA AND DISPOSE OF COMBUSTIBLE RUBBISH SAFELY AND PROMPTLY.

### END OF SECTION 01550

### DIVISION 5 - METALS

### SECTION 05500 - MISCELLANEOUS METALS

- DESCRIPTION OF WORK
- THIS SECTION SPECIFIES THE MISCELLANEOUS METAL ITEMS TO BE PART OF THE ROOF EXHAUST FLEUE INSTALLATION
- ANY MISCELLANEOUS FRAMING MEMBERS AS NECESSARY PER DRAWINGS

#### 2. PERFORMANCE REQUIREMENTS

- TERMINAL MOVEMENTS: PROVIDE EXTERIOR METAL FABRICATIONS THAT ALLOW FOR THERMAL MOVEMENTS RESULTING FROM THE FOLLOWING MAXIMUM CHANGE (RANGE) IN AMBIENT AND SURFACE TEMPERATURES BY PREVENTING BUCKLING, OPENING OF JOINTS, OVERSTRESSING OF COMPONENTS, FAILURE OF CONNECTIONS, AND OTHER DETRIMENTAL EFFECTS. BASE ENGINEERING CALCULATION ON SURFACE TEMPERATURES OF MATERIALS DUE TO BOTH SOLAR HEAT GAIN AND NIGHTTIME-SKY HEAT LOSS. TEMPERATURE CHANGE (RANGE): 120 DEG F AMBIENT; 180 DEG F MATERIAL SURFACES.

#### 3. SUBMITTALS

- PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED ON DRAWINGS OR SPECIFICATIONS.
- SHOP DRAWINGS: SHOW FABRICATION AND INSTALLATION DETAILS FOR METAL FABRICATIONS.
- CERTIFICATES: WELDER AND WELD PROCEDURE QUALIFICATIONS AND WELD INSPECTION REPORTS.

#### 4. QUALITY ASSURANCE

- WELDING: QUALIFY PROCEDURES AND PERSONNEL ACCORDING TO THE FOLLOWING:
  - AWS D1.1, 'STRUCTURAL WELDING CODE--STEEL.'
  - AWS D1.3, 'STRUCTURAL WELDING CODE--SHEET STEEL.'

B. METAL SURFACES, GENERAL: PROVIDE MATERIALS WITH SMOOTH, FLAT SURFACES, UNLESS OTHERWISE INDICATED. FOR METAL FABRICATIONS EXPOSED TO VIEW IN THE COMPLETED WORK, PROVIDE MATERIALS WITHOUT SEAM MARKS, ROLLER MARKS, ROLLED TRADE NAMES, OR BLEMISHES.

C. GALVANIZER QUALIFICATIONS: ENGAGE THE SERVICES OF A QUALIFIED GALVANIZER WHO HAS DEMONSTRATED A MINIMUM OF FIVE YEARS EXPERIENCE IN THE

## ARCHITECTURAL SPECIFICATIONS (CONT.)

SUCCESSFUL APPLICATION OF GALVANIZED COATINGS SPECIFIED IN THIS SECTION IN THE FACILITY WHERE THE WORK IS TO BE PERFORMED AND WHO WILL APPLY THE COATINGS WITHIN THE SAME FACILITY.

D. PRE-INSTALLATION CONFERENCE: CONTRACTOR SHALL SCHEDULE A MEETING TO BE ATTENDED BY CONTRACTOR, ENGINEER, FABRICATOR, AND GALVANIZER PRIOR TO STARTING WORK. AGENCY SHALL PROVIDE THE FOLLOWING: PROJECT SCHEDULE SOURCE FOR EACH FABRICATION, COORDINATION BETWEEN FABRICATOR AND GALVANIZER AND ADDRESSING OF WORK, FINISH OF SURFACES, APPLICATION OF COATINGS, SUBMITTALS, AND APPROVALS.

E. INSPECTION EXCEPT AS OTHERWISE SPECIFIED, ONLY VISUAL INSPECTION OF WELDS, MATERIALS, WORKMANSHIP, FINISHED PRODUCTS, AND INSTALLATION IS REQUIRED.

#### 5. PRODUCT CONDITIONS

A. FIELD MEASUREMENTS: VERIFY ACTUAL LOCATIONS OF WALLS AND OTHER CONSTRUCTION CONTIGUOUS WITH METAL FABRICATIONS BY FIELD MEASUREMENTS BEFORE FABRICATION AND INDICATE MEASUREMENTS ON SHOP DRAWINGS. PROVIDE ALLOWANCE FOR TRIMMING AND FITTING AT SITE.

#### 6. COORDINATION

- COORDINATE INSTALLATION OF ANCHORAGES FOR METAL FABRICATIONS. FURNISH SETTING DRAWINGS, TEMPLATES, AND DIRECTIONS FOR INSTALLING ANCHORAGES, INCLUDING SLEEVES, CONCRETE INSERTS, ANCHOR BOLTS, AND ITEMS WITH INTEGRAL ANCHORS, THAT ARE TO BE EMBEDDED IN CONCRETE OR MASONRY. DELIVER SUCH ITEMS TO PROJECT SITE IN TIME FOR INSTALLATION.

#### 7. SCHEDULE

A. METAL FABRICATIONS INCLUDE, BUT ARE NOT LIMITED TO, METAL PIECES AS REQUIRED FOR INSTALLATION OF ROOF TOP EXHAUST FLEUES AND COVER PLATE AS INDICATED ON ARCHITECTURAL DRAWINGS. REQUIREMENTS FOR MATERIALS AND COATINGS/FINISHES WHICH ARE INCLUDED AS PART OF THE WORK SPECIFIED IN THIS SECTION SHALL BE PROVIDED TO ARCHITECT FOR REVIEW AND APPROVAL.

#### 8. FASTENERS

A. GENERAL: UNLESS OTHERWISE INDICATED, PROVIDE TYPE 316 STAINLESS-STEEL FASTENERS FOR EXTERIOR USE AND ZINC-PLATED FASTENERS WITH COATING COMPLYING WITH ASTM B 533, CLASS FE2N Z 5, WITHIN EXTERIOR WALLS. PROVIDE STAINLESS-STEEL FASTENERS FOR FASTENING ALUMINUM. SELECT FASTENERS FOR TYPE, GRADE, AND CLASS REQUIRED.

#### 9. FABRICATION, GENERAL

- SHOP ASSEMBLY: PRE-ASSEMBLE ITEMS IN THE SHOP TO GREATEST EXTENT POSSIBLE. DISASSEMBLE UNITS ONLY AS NECESSARY FOR SHIPPING AND HANDLING LIMITATIONS. USE CONNECTIONS THAT MAINTAIN STRUCTURAL VALUE OF JOINED PIECES. CLEARLY MARK UNITS FOR REASSEMBLY AND COORDINATED INSTALLATION.
- CUT, DRILL, AND PUNCH METALS CLEANLY AND ACCURATELY. REMOVE BURRS AND SLAG EDGES TO A RADIUS OF APPROXIMATELY 1/32 INCH UNLESS OTHERWISE INDICATED. REMOVE SHARP OR ROUGH AREAS ON EXPOSED SURFACES.
- FORM BENT-METAL CORNERS TO SMALLEST RADIUS POSSIBLE WITHOUT CAUSING GRAIN SEPARATION OR OTHERWISE IMPAIRING WORK.
- FORM EXPOSED WORK TRUE TO LINE AND LEVEL WITH ACCURATE ANGLES AND SURFACES AND STRAIGHT EDGES.

E. WELD CORNERS AND SEAMS CONTINUOUSLY TO COMPLY WITH THE FOLLOWING:

1. USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS.

2. OBTAIN FUSION WITHOUT UNDERCUT OR OVERLAP.

3. REMOVE WELDING FLUX IMMEDIATELY.

4. AT EXPOSED CONNECTIONS, FINISH EXPOSED WELDS AND SURFACES SMOOTH AND BLENDED SO NO ROUGHNESS SHOWS AFTER FINISHING AND CONTOUR OF WELDED SURFACE MATCHES THAT OF ADJACENT SURFACE.

F. FORM EXPOSED CONNECTIONS WITH HARLINE JOINTS, FLUSH AND SMOOTH USING CONCEALED FASTENERS WHERE POSSIBLE. WHERE EXPOSED FASTENERS ARE REQUIRED, USE PHILLIPS FLAT-HEAD (COUNTERSUNK) SCREWS OR BOLTS, UNLESS OTHERWISE INDICATED. LOCATE JOINTS WHERE LEAST CONSPICUOUS.

G. FABRICATE SEAMS AND OTHER CONNECTIONS THAT WILL BE EXPOSED TO WEATHER IN A MANNER TO EXCLUDE WATER.

PROVIDE WEER HOLES WHERE WATER MAY ACCUMULATE.

H. CUT, REINFORCE, DRILL, AND TAP METAL FABRICATIONS AS INDICATED TO RECEIVE 'FINISH HARDWARE, SCREWS, AND SIMILAR ITEMS.

I. PROVIDE FOR ANCHORAGE OF TYPE INDICATED; COORDINATE WITH SUPPORTING STRUCTURE, SPACE ANCHORING

DEVICES TO SECURE METAL FABRICATIONS RIGIDLY IN PLACE AND TO SUPPORT INDICATED LOADS.

#### 10. MISCELLANEOUS FRAMING AND SUPPORTS

- GENERAL: PROVIDE STEEL FRAMING AND SUPPORTS NOT SPECIFIED IN OTHER SECTIONS AS NEEDED TO COMPLETE THE WORK.
- FABRICATE UNITS FROM STEEL SHAPES, PLATES, AND BARS OF WELDED CONSTRUCTION UNLESS OTHERWISE INDICATED. FABRICATE TO SIZES, SHAPES, AND PROFILES INDICATED AND AS NECESSARY TO RECEIVE ADJACENT CONSTRUCTION RETAINED BY FRAMING AND SUPPORTS. CUT, DRILL, AND TAP UNITS TO RECEIVE HARDWARE, HANGERS, AND SIMILAR ITEMS.

1. FABRICATE UNITS FROM SLOTTED CHANNEL FRAMING WHERE INDICATED.

2. FURNISH INSERTS IF UNITS ARE INSTALLED AFTER CONCRETE IS PLACED.

#### 11. MISCELLANEOUS STEEL TRIM

A. UNLESS OTHERWISE INDICATED, FABRICATE UNITS FROM STEEL SHAPES, PLATES, AND BARS OF PROFILES SHOWN WITH CONTINUOUSLY WELDED JOINTS AND SMOOTH EXPOSED EDGES. MITER CORNERS AND USE CONCEALED FIELD SPICES WHERE POSSIBLE.

B. PROVIDE CUTOUTS, FITTINGS, AND ANCHORAGES AS NEEDED TO COORDINATE ASSEMBLY AND INSTALLATION WITH OTHER WORK. PROVIDE WITH INTEGRALLY WELDED STEEL STRAP ANCHORS FOR EMBEDDING IN CONCRETE OR MASONRY CONSTRUCTION.

A. FINISHES, GENERAL (CONTINUED ON A0.1) COMPLY WITH THE NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM) METAL FINISHES MANUAL FOR ARCHITECTURAL AND METAL PRODUCTS' FOR RECOMMENDATIONS FOR APPLYING AND DESIGNATING FINISHES.

#### B. FINISH AND METAL FABRICATIONS AFTER ASSEMBLY.

#### 12. STEEL AND IRON FINISHES

A. PREPARATION FOR SHOP PRIMING: PREPARE UNCOATED FERROUS-METAL SURFACES TO COMPLY WITH MINIMUM REQUIREMENTS INDICATED BELOW FOR SSPC SURFACE PREPARATION SPECIFICATIONS, AND ENVIRONMENTAL EXPOSED CONDITIONS OF INSTALLED METAL FABRICATIONS:

1. INTERIORS (SSPC ZONE 1A): SSPC-SP.7, 'BRUSH OFF BLAST CLEANING.'

2. APPLY SHOP PRIMER TO UNCOATED SURFACES OF METAL FABRICATIONS, EXCEPT THOSE TO BE FIELD WELDED, UNLESS OTHERWISE INDICATED. EXTEND PRIMING OF PARTIALLY EMBEDDED MEMBERS TO A DEPTH OF 2 INCHES.

3. COMPLY WITH SSPC-PA 1, 'PAINT APPLICATION SPECIFICATION NO. 1: SHOP, FIELD, AND MAINTENANCE PAINTING OF STEEL,' FOR SHOP PAINTING.

4. COMPLY WITH SSPC-PA 2, 'MEASUREMENT OF DRY COATING THICKNESS WITH MAGNETIC GAGES.'

#### 14. INSTALLATION, GENERAL

A. CUTTING, FITTING, AND PLACEMENT: PERFORM CUTTING, DRILLING, AND FITTING REQUIRED FOR INSTALLING METAL FABRICATIONS. SET METAL FABRICATIONS ACCURATELY IN LOCATION, ALIGNMENT, AND ELEVATION, WITH EDGES AND SURFACES LEVEL, PLUMB, TRUE, AND FREE OF RACK; AND MEASURED FROM ESTABLISHED LINES AND LEVELS.

B. FIT EXPOSED CONNECTIONS ACCURATELY TOGETHER TO FORM HARLINE JOINTS WELD CONNECTIONS THAT ARE NOT TO BE LEFT AS EXPOSED JOINTS BUT CANNOT BE SHOP WELDED BECAUSE OF SHIPPING SIZE LIMITATIONS. DO NOT WELD, CUT, OR ABRADE SURFACES OF EXTERIOR UNITS THAT HAVE BEEN HOT-DIP GALVANIZED AFTER FABRICATION AND ARE FOR BOLTED OR SCREWED FIELD CONNECTIONS.

C. FIELD WELDING: COMPLY WITH THE FOLLOWING REQUIREMENTS:

1. USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS.

2. OBTAIN FUSION WITHOUT UNDERCUT OR OVERLAP.

3. REMOVE WELDING FLUX IMMEDIATELY.

4. AT EXPOSED CONNECTIONS, FINISH EXPOSED WELDS AND SURFACES SMOOTH AND BLENDED SO NO ROUGHNESS SHOWS AFTER FINISHING AND CONTOUR OF WELDED SURFACE MATCHES THAT OF ADJACENT SURFACE.

D. FASTENING TO IN-PLACE CONSTRUCTION: PROVIDE ANCHORAGE DEVICES AND FASTENERS WHERE METAL FABRICATIONS ARE REQUIRED TO BE FASTENED TO IN-PLACE CONSTRUCTION. PROVIDE THREADED FASTENERS FOR USE WITH CONCRETE AND MASONRY INSERTS, TOGGLE BOLTS, THROUGH BOLTS, LAG BOLTS, WOOD SCREWS, AND OTHER CONNECTIONS.

#### 15. INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

A. GENERAL: INSTALL FRAMING AND SUPPORTS TO COMPLY WITH REQUIREMENTS OF ITEMS BEING SUPPORTED, INCLUDING MANUFACTURERS WRITTEN INSTRUCTIONS AND REQUIREMENTS INDICATED ON SHOP DRAWINGS. ANCHOR SUPPORTS TO FIELD OPERABLE PARTITIONS SECURELY TO AND RIGIDLY BRACE FROM BUILDING STRUCTURE.

#### 16. ADJUSTING AND CLEANING

## ARCHITECTURAL SPECIFICATIONS (CONT.)

- GALVANIZED SURFACES: CLEAN FIELD WELDS, BOLTED CONNECTIONS, AND ABRADED AREAS AND REPAIR GALVANIZING
- TO COMPLY WITH ASTM A 780.

### END OF SECTION 05500

### SECTION 07840 - FIRESTOPPING

### PART 1 - GENERAL

#### 1.1 DESCRIPTION OF WORK

A. WORK INCLUDED: THIS SECTION SPECIFIES THE FOLLOWING:

- THROUGH-PENETRATION FIRESTOP SYSTEMS FOR PENETRATIONS THROUGH FIRE-RESISTANCE-RATED CONSTRUCTIONS, INCLUDING BOTH EMPTY OPENINGS AND OPENINGS REQUIRING PENETRATING ITEMS.
- 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 CONSTRUCTION PENETRATED, AS DETERMINED PER ASTM E 814.

C. FOR THROUGH-PENETRATION FIRESTOP SYSTEMS EXPOSED TO TRAFFIC, MOISTURE, AND PHYSICAL DAMAGE, PROVIDE PRODUCTS THAT, AFTER CURING, DO NOT DEGRADE 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.

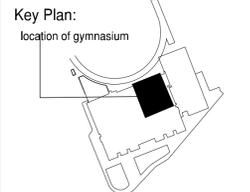
2. TYPES OF CONSTRUCTIONS PENETRATED, INCLUDING FIRE-RESISTANCE RATINGS AND, WHERE APPLICABLE, THICKNESSES OF CONSTRUCTION PENETRATED.

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.

14. 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



Scale:

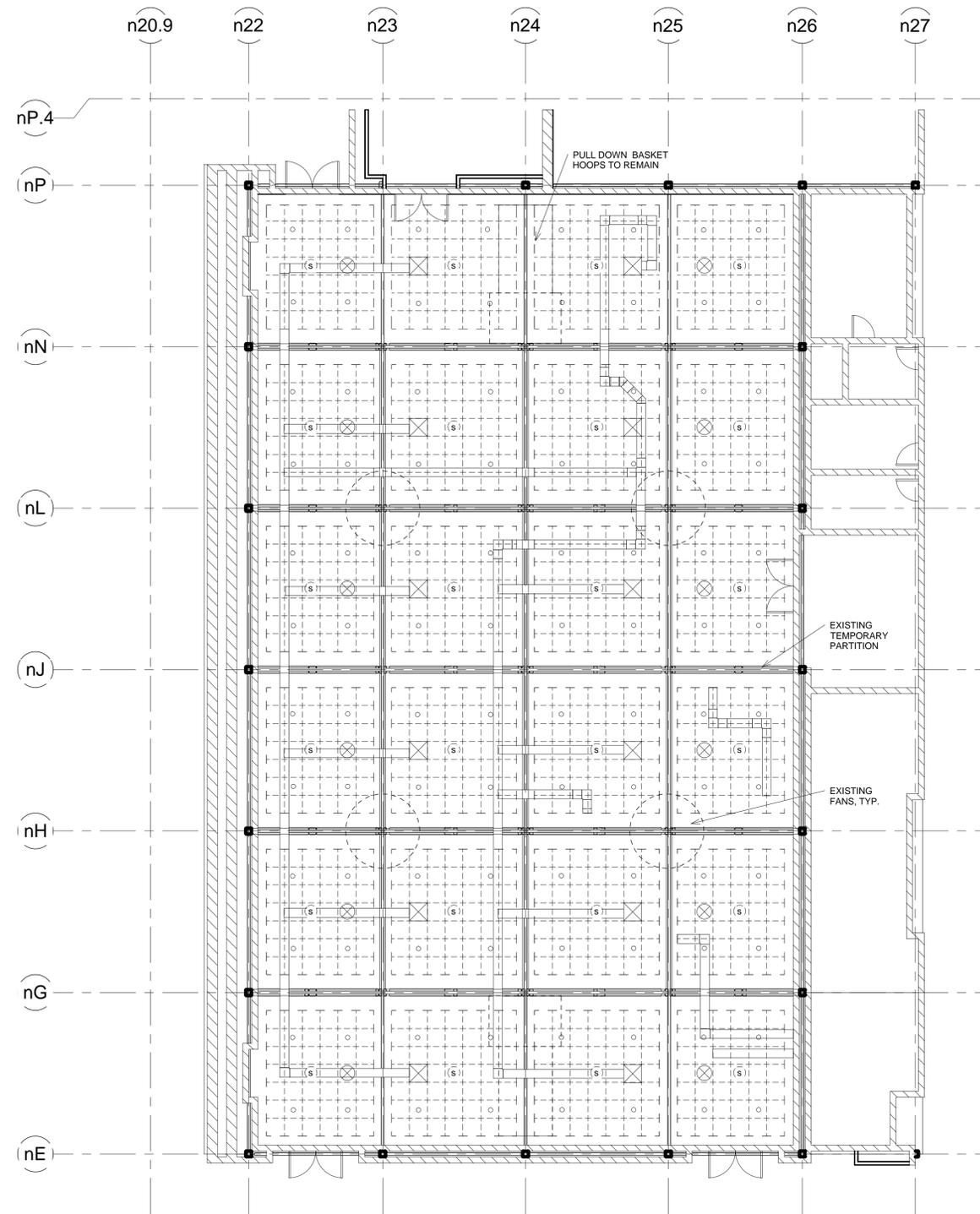
Jacobs Project No.: R7W71636

Drawing Title:  
**REFLECTED  
CEILING PLAN  
DEMOLITION**

Date: JULY 2015  
Designed By:  
Drawn By:  
Checked By: AD-100

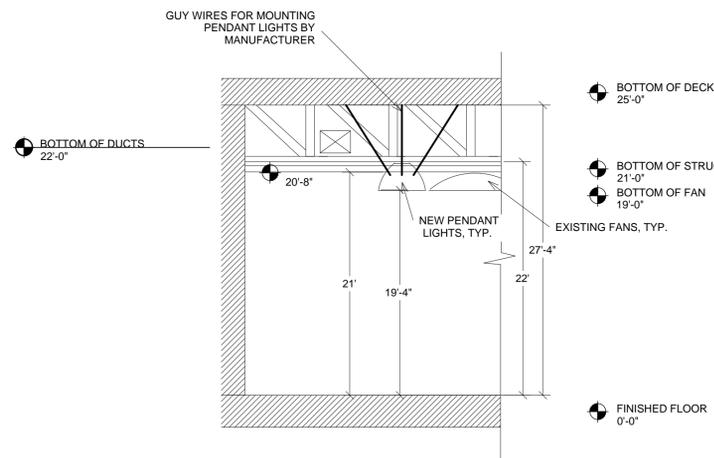
**DEMOLITION NOTES:**

- REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION ON REMOVAL OF LIGHTING, RELATED CONDUITS, JUNCTION BOXES, AND OTHER ELECTRICAL POWER COMPONENTS.
- DURING ENTIRE PERIOD OF DEMOLITION AND CONSTRUCTION, MAINTAIN IN OPERATING CONDITION ALL EXISTING EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES AND ALARMS AS PER CODE.
- COORDINATE ANY AND ALL CONSTRUCTION ACTIVITIES WITH JACOBS ENGINEERS AND BASE BUILDING REPRESENTATIVE.
- WHERE ELECTRICAL RECEPTACLES, COMMUNICATION RECEPTACLES, CARD ACCESS READERS, LIGHT FIXTURES, THERMOSTATS OR SIMILAR DEVICES EXIST IN A WALL OR CEILING TO BE REMOVED, REMOVE ASSOCIATED EXISTING WIRE BACK TO ITS SOURCE.
- PROTECT BASE BUILDING HVAC SYSTEM DURING ALL PHASES.
- PROTECT EXISTING PARTITION, FLOOR, ELEVATOR, AND CEILING FINISHES BEYOND CONTRACT AREA FROM DAMAGE DURING ALL PHASES.
- PROTECT EXISTING SMOKE DETECTORS, EMERGENCY STROBES, EMERGENCY FIRE PULLS, AND ALL OTHER CONTROL, MONITORING OR NOTIFICATION DEVICES DURING ALL PHASES. COORDINATE WITH ENGINEERING DOCUMENTATION AND BASE BUILDING REPRESENTATIVE FOR ADDITIONAL INFORMATION AND RESTRICTIONS.
- EXISTING SPRINKLER SYSTEM TO REMAIN. PROTECT DURING ALL PHASES. COORDINATE WITH ENGINEERING DOCUMENTATION AND BASE BUILDING REPRESENTATIVE FOR SPRINKLER RESTRICTIONS.
- PROTECT FROM DAMAGE ALL DOORS AND ASSOCIATED HARDWARE SHOWN TO REMAIN FOR REUSE.
- FOR ADDITIONAL REQUIREMENTS AND RESTRICTIONS, VERIFY THAT CONSTRUCTION INDICATED FOR REMOVAL IS NOT LOAD BEARING.
- PROVIDE ADDITIONAL FIRE-STOPPING AS REQUIRED TO MAINTAIN TWO-HOUR FIRE RATING.
- DO NOT CUT OR REMOVE STRUCTURAL STEEL, STRUCTURAL CONCRETE, OR LOAD BEARING UNIT MASONRY WITHOUT WRITTEN APPROVAL OF BASE BUILDING REPRESENTATIVE.



**DEMOLITION LEGEND:**

- EXISTING CEILING GRID SYSTEM (SHOWN DASHED) TO BE REMOVED
- EXISTING WALLS TO REMAIN
- SPRINKLER HEADS TO REMAIN AS IS
- HVAC DIFFUSERS TO BE REPLACED WITH NEW TYPE, GC TO PROVIDE REPLACEMENT CUT SHEET TO BE APPROVED BY ARCHITECT
- EXISTING SPEAKERS TO BE SALVAGED RETURN TO OWNER. COORDINATE WIRING WITH NEW.
- EXISTING RECESSED LIGHTS TO BE SALVAGED RETURN TO OWNER. COORDINATE WIRING WITH NEW.



**2** REFERENCE SECTION  
AD-100 SCALE: 1/8" = 1'-0"



**3** REFERENCE PHOTO OF EXISTING CONDITION  
AD-100 SCALE: NOT TO SCALE



**4** REFERENCE PHOTO OF EXISTING CONDITION  
AD-100 SCALE: NOT TO SCALE

**1** REFLECTED CEILING DEMOLITION PLAN  
AD-100 SCALE: 1/8" = 1'-0"

LIGHTING SYMBOLS	
	<b>TYPICAL LUMINAIRE DESIGNATIONS</b> (F1) INDICATES LUMINAIRE TYPE. REFER TO LUMINAIRE SCHEDULE FOR DESCRIPTION. (RP5) INDICATES PANEL DESIGNATION. (7) INDICATES CIRCUIT BREAKER NUMBER. PROVIDE 20A/1P AND 2#12 FOR EACH CIRCUIT NUMBER & #12G IN 3/4" CONDUIT, UNLESS OTHERWISE INDICATED. SEE GENERAL NOTE 1.
	CEILING OR WALL MOUNTED LUMINAIRE
	PENDANT MOUNTED LUMINAIRE
	LUMINAIRE FOR NIGHT LIGHT OPERATION (TYPICAL)
	WALL MOUNTED EXIT SIGN, SHADED AREAS INDICATE NUMBER OF FACES, DIRECTION ARROWS AS INDICATED
	CEILING MTD. EXIT SIGN, SHADED AREAS INDICATE NUMBER OF FACES, DIRECTION ARROWS AS INDICATED
	EMERGENCY BATTERY UNIT LUMINAIRE
	PHOTO CELL

SWITCH SYMBOLS	
	SINGLE POLE SWITCH, 20A, 120-277VAC
	THREE-WAY SWITCH, 20A, 120-277VAC
	DIMMER CONTROL
	LOW VOLTAGE SWITCH
	OCCUPANCY SENSOR WALL SWITCH, WATT STOPPER (INFRARED) WI-200 OR APPROVED EQUAL
	OCCUPANCY SENSOR MOUNTED IN CEILING, STEINEL (DUAL TECHNOLOGY) HBS-300 OR APPROVED EQUAL

OCCUPANCY SENSOR NOTES:  
1. PLACE ULTRASONIC SENSORS 6'-0" AWAY FROM SUPPLY DUCTS.

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
	REMOVE EXISTING ITEMS INSIDE THIS AREA, UNLESS OTHERWISE INDICATED
	EXISTING ITEMS TO BE RELOCATED INSIDE THIS AREA, UNLESS OTHERWISE INDICATED
	RELOCATION OF EXISTING ITEMS INSIDE THIS AREA, UNLESS OTHERWISE INDICATED

ELECTRICAL SYMBOLS	
	JUNCTION BOX
	PANELBOARD
	WIRE/CONDUIT EXPOSED
	WIRE/CONDUIT CONCEALED
	HOME RUN INDICATION WITH PANEL DESIGNATION (RP5), CIRCUIT No. (7)&(9), OVERCURRENT PROTECTION 'AMPS AND POLES' (20)2 AND WIRE/CONDUIT DESIGNATION (2W20). SEE WIRE AND CONDUIT SIZE SCHEDULE. PROVIDE 20A/1P AND 2 #12 FOR EACH HOMERUN ARROW & 1 #12G IN 3/4" CONDUIT, UNLESS OTHERWISE INDICATED. SEE GENERAL NOTE 1.
	CIRCUIT BREAKER
	CEILING MOUNTED SPEAKER

ABBREVIATIONS	
A, AMP	AMPERE(S)
AC	ALTERNATING CURRENT
AF	AMPERE FRAME (CIRCUIT BREAKER)
AFF	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
BLDG	BUILDING
BP	BYPASS
BSC	BIOLOGICAL SAFETY CABINET
C	CONDUIT
C/ CDT	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT ONLY
COAX	COAXIAL CABLE
COL	COLUMN
COMM	COMMUNICATIONS
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CPU	CENTRAL PROCESSING UNIT
CR	CARD READER
CRT	CATHODE RAY TUBE MONITOR
CS	CONTROL SWITCH
CU	COPPER
CUH	CABINET UNIT HEATER
CT	CURRENT TRANSFORMER
D	DEPTH
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DEMO	DEMOLITION
DIA	DIAMETER
DN	DOWN
DISC	DISCONNECT
DIST	DISTRIBUTION
DWG	DRAWING
E	ELECTRIC / EMERGENCY
EC	ELECTRICAL CONTRACTOR, EMPTY CONDUIT
EF	EXHAUST FAN
EL	ELEVATION
ELECT, ELEC	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
EWC	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
FUTURE	FUTURE
FVR	FULL VOLTAGE REVERSIBLE
FVNR	FULL VOLTAGE NON REVERSIBLE
G	GROUND (CONDUCTOR)
GA	GAUGE
GEN	GENERATOR
GF	GROUND FAULT
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GND, GRD	GROUND
GPS	GENERATOR PARALLELING SWITCHGEAR
GRC	GALVANIZED RIGID STEEL CONDUIT
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC SWITCH
HP	HORSEPOWER
HT	HEIGHT
HWP	HOT WATER PUMP
HV	HIGH VOLTAGE
HZ	HERTZ
I/INST	INSTANTANEOUS
ICM	INTERCOM MASTER
ICR	INTERCOM REMOTE
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INSTR	INSTRUMENT/INSTRUMENTATION
JB, JBOX	JUNCTION BOX
K	KEY LOCK (KEY INTERLOCK SCHEME)
KA	KILOAMPERES
KCM	THOUSAND CIRCULAR MILS
KEF	KITCHEN EXHAUST FAN
KW	KILOWATTS
KWH	KILOWATT HOUR
KV	KILOVOLTS
KVA	KILO VOLT-AMPERES
KVAR	KVA REACTIVE
L	LOCKING TYPE LOAD
LA	LIGHTNING SURGE ARRESTER
LAB	LABORATORY
LAN	LOCAL AREA NETWORK
LT	LONG TIME
LTG	LIGHTING
LP	LIGHTING PANEL

ABBREVIATIONS	
M	METER
mm	MILLIMETER
mm2	MILLIMETERS SQUARED
MAX	MAXIMUM
MCB	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
NORMAL	NORMAL
NTS	NOT TO SCALE
NWP	NETWORK PROTECTOR
OCB	OIL CIRCUIT BREAKER
OL	OVERLOAD(S)
OC	ON-CENTER
OS	OCCUPANCY SENSOR
P	POLE
PA	PUBLIC ADDRESS SYSTEM
PB	PUSHBUTTON/PULLBOX
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	PAIR
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
SF	SUPPLY FAN
SF6	SULFERHEXAFLORIDE
SPEC	SPECIFICATION
SPKR	SPEAKER
SS	STAINLESS STEEL/SOLID STATE
ST	SHUNT TRIP/SHORT TIME
STD	STANDARD
STP	SHIELDED TWISTED PAIR
STS	STATIC TRANSFER SWITCH
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
SYS	SYSTEM
T	TRANSFORMER
TB	TERMINAL BLOCK
TELECOM	TELECOMMUNICATIONS
TDR	TIME DOMAIN REFLECTOMETER
TEF	TOILET EXHAUST FAN
TEL, 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
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
V	VOLT(S)
VA	VOLT-AMPERES
VAV	VARIABLE AIR VOLUME BOX
VFD	VARIABLE FREQUENCY DRIVE
VM	VOLTMETER
VS	VOLTMETER SWITCH
W	WITH
W	WIRE/WATT/ WIDTH
WCR	WITHSTAND CURRENT RATING
WM	WATTMETER
WP	WEATHERPROOF
WT	WATERTIGHT
XFMR	TRANSFORMER
XP	EXPLOSION-PROOF
ZI	ZONE INTERLOCKING
ΔY	DELTA-WYE
2S2W	TWO SPEED TWO WINDING
2SR2W	TWO SPEED REVERSING TWO WINDING

### 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.
- 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 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 (9) 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 CONTINUOUS DAYS DURING OCCUPIED BUILDING OPERATION THAT ADDED LOAD DOES NOT EXCEED 80% OF MAIN/FEEDER CIRCUIT BREAKER RATING PRIOR CONNECTING TO NEW LOAD.
- 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. COORDINATE WITH OTHER TRADES.
- 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.

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.



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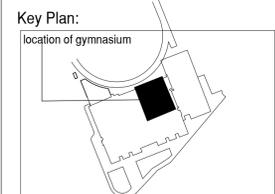
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Revision:  
Date: By: Description:

CLIENT AND/OR PROJECT INFO.

**CHELSEA HIGH SCHOOL**  
**299 EVERETT AVE.**  
CHELSEA, MA



Key Plan:  
location of gymnasium

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

Jacobs Project No.: R7W71636

Drawing Title:  
**ELECTRICAL SYMBOLS, ABBREVIATIONS AND SCHEDULE**

Date: May 2015

Designed By: LE Drawing No.:

Drawn By: LE

Checked By: SS

**E-001**

ELECTRICAL SPECIFICATIONS

DIVISION 26 - ELECTRICAL

SECTION 260010 - 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 1-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 260505 - 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 260300- 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
  5. WALL MOUNTED PROTECTIVE CAGES OVER SPEAKERS
- B. EACH SHOP DRAWING SHALL BE SUBMITTED SEPARATELY UNDER THE APPLICABLE SPECIFICATION SECTION NUMBER.

SECTION 260010 - 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 260533 - 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 CIRCUITSSHALL 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 CEILINGS 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 (METALIC-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 ALLIED, REPUBLIC, TRIANGLE OR WHEATLAND. METAL CONDUIT FITTINGS SHALL BE AS MANUFACTURED BY CROUSE-HINDS, APPLTON, 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 260534 - 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, FA/SECURITY, 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 260535 - OUTLET BOXES

- A. PROVIDE ONE PIECE, PRESSED GALVANIZED STEEL 2-1/8TH INCH DEEP OUTLET BOXES WITH KNOCKOUTS. CONCEALED OUTLET BOXES SHALL BE FLUSHED 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 260526 - 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 260513- 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 600-VOLT THHN/THWN 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, 600 VOLTS TYPE THWN/THHN-2 INSULATED ON WIRES UP TO AND INCLUDING NO. 8 AWG. SIZES. NO. 6 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 QA-B QUICKLUG OR EQUAL. FEEDER TAPS SHALL BE BURNDY QPX VERSITAP OR EQUAL.
- F. MC CABLE SHALL BE COPPER, 600 VOLT, THHN/THWN 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-50,-75, O.Z. GEDNEY AMC OR T&B 3110.
- 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 "BRIDAL 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 CEILINGS OR ON CEILING SUPPORT WIRES. DO NOT SUPPORT MC CABLE BY MEANS OF CABLE TIES.
  5. MC CABLE SUPPORT: MAXIMUM SPACING BETWEEN SUPPORTS IS 6 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 262726 - 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 WIRED TERMINALS OR EXTRA HEAVY-DUTY PLUG-TAIL/SNAP-CONNECT DEVICES WITH 6 INCH RIGHT ANGLE PRE-STRIPPED #12 SOLID PIGTAIL AS MANUFACTURED BY ARROW-HART, BRYANT, HUBBELL, PASS & SEYMOUR (P&S) OR LEVITON. PROVIDE 5% SPARE PIGTAIL DEVICES IF USED. DEVICES IN WET OR DAMP LOCATIONS SHALL BE UL 498 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 265100 - LIGHTING SYSTEMS

- A. PROVIDE COMPLETE OPERATIONAL ILLUMINATION SYSTEMS, WITH LUMINAIRES AS SPECIFIED IN LUMINAIRE SCHEDULE. 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 CEILINGS 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 LUMINAIRES PLUMB AND TRUE, AT UNIFORM HEIGHT AS INDICATED. INSTALL FIXTURES IN ACCORDANCE WITH NECA/IESNA 500 - 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 260923 - 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 20 FEET RADIUS AT 21 FEET MOUNTING HEIGHT, 360 DEGREE COVERAGE) FOR WORKING-AT-DESK TOP TYPE MOTION. PROVIDE SENSOR WITH SPDT 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
  6. HUBBEL BUILDING AUTOMATION INC.
  7. CRESTRON
  8. LEVITON MANUFACTURING CO. INC
  7. WATT STOPPER;

CONSULTANTS

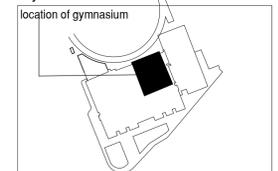
Revision:

Date: By: Description:

CLIENT AND/OR PROJECT INFO.

CHELSEA HIGH SCHOOL 299 EVERETT AVE. CHELSEA, MA

Key Plan:



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

Jacobs Project No.: R7W71636

Drawing Title:

ELECTRICAL - SPECIFICATIONS

Date: May 2015

Designed By: LE

Drawn By: LE

Checked By: SS

Drawing No.:

E-002

CONSULTANTS

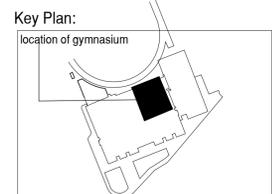
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Revision:

Date:	By:	Description:

CLIENT AND/OR PROJECT INFO.

**CHELSEA HIGH SCHOOL**  
**299 EVERETT AVE.**  
CHELSEA, MA



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

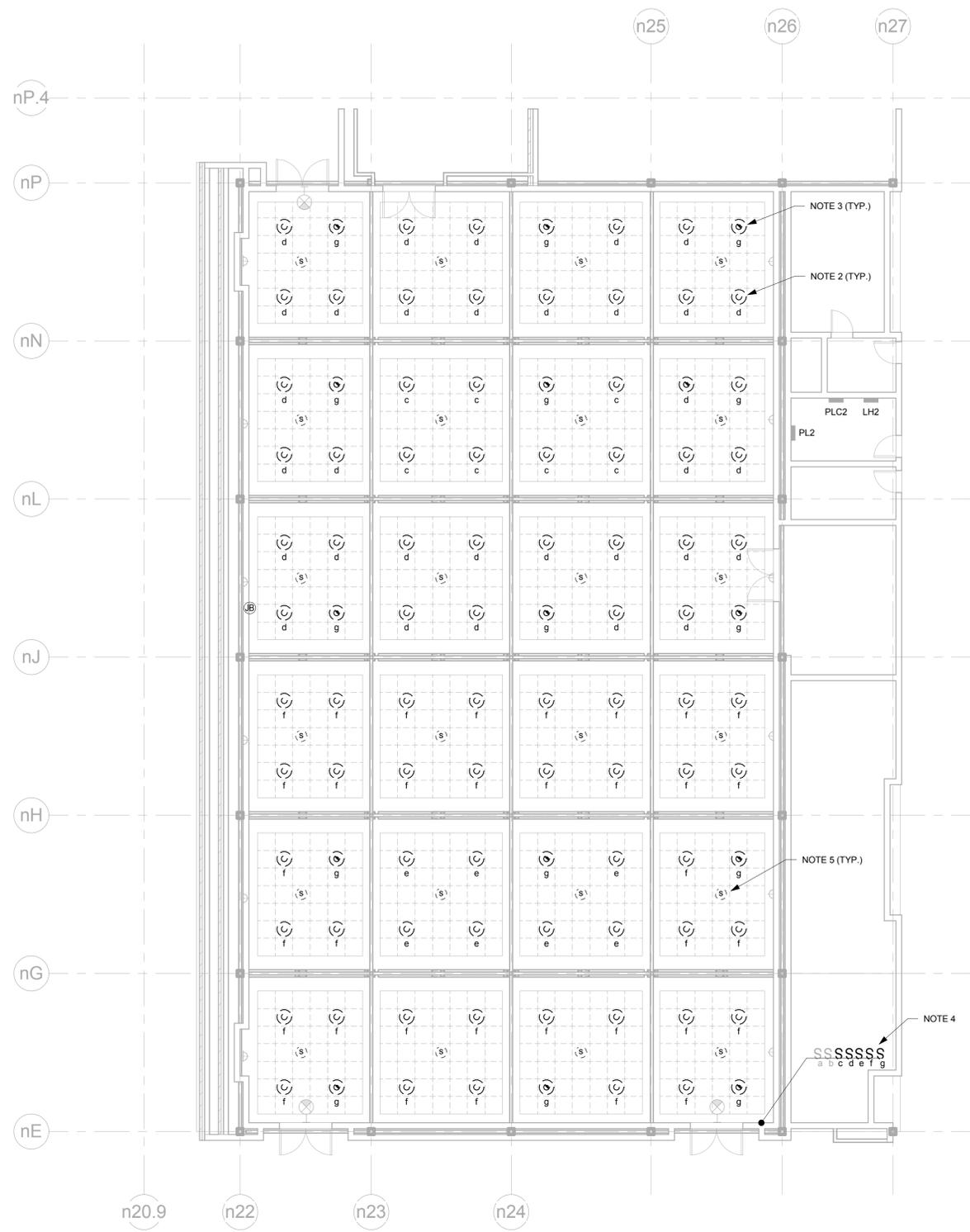
Jacobs Project No.: R7W71636

Drawing Title:  
**ELECTRICAL -  
LEVEL 2  
DEMOLITION  
LIGHTING PLAN**

Date: May 2015

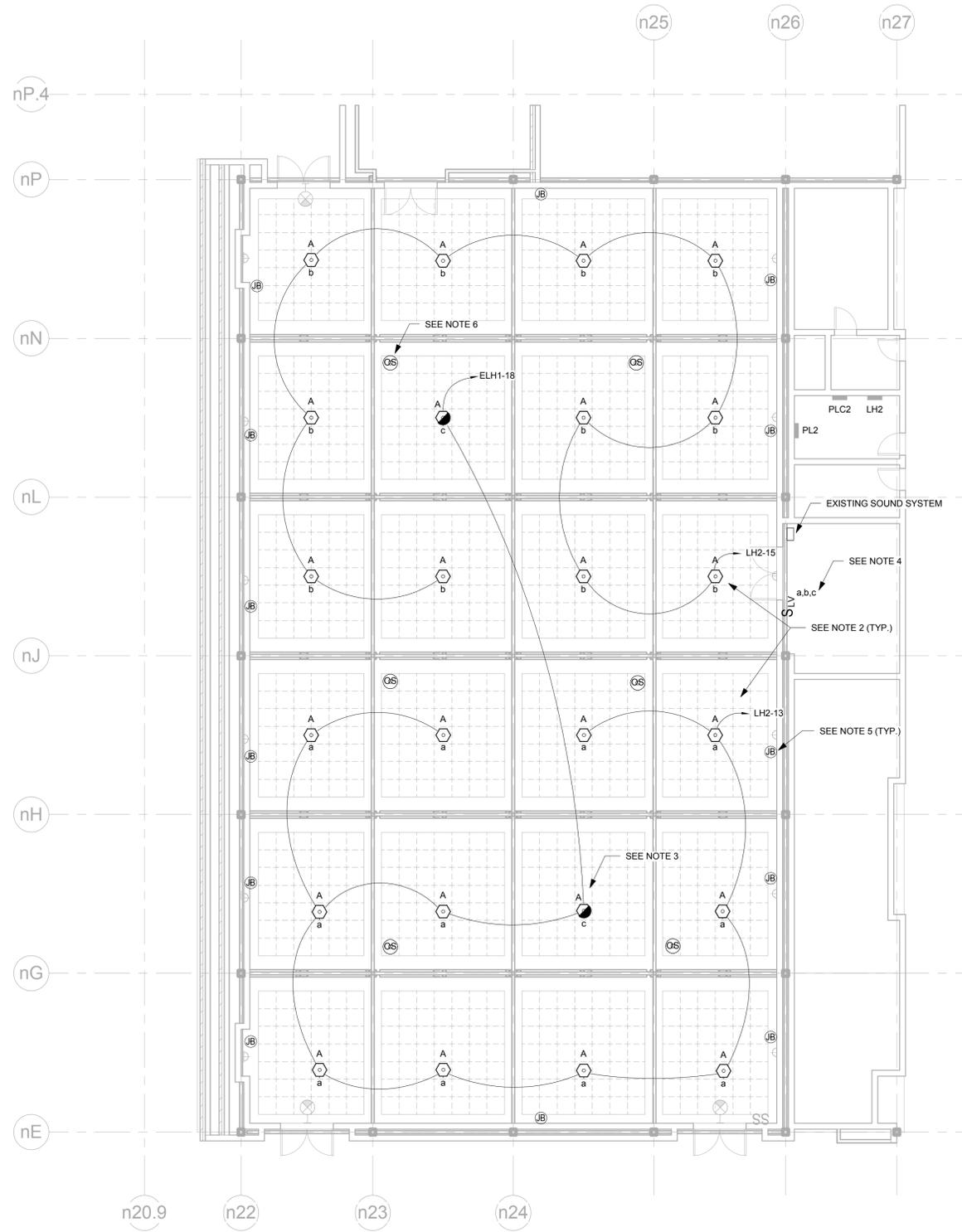
Designed By: LE  
Drawn By: LE  
Checked By: SS

Drawing No.:  
**ED-101**



- NOTES:**
- REFER TO E-001 FOR GENERAL DEMOLITION NOTES AND OTHER REQUIREMENTS.
  - EXISTING LIGHT FIXTURES SHALL BE REMOVED. EXISTING LIGHTING BRANCH CIRCUITS "LH2-13, LH2-15" SERVING DEMOLITION LIGHT FIXTURES SHALL BE REMOVED TO THE NEAREST LIVE CIRCUIT JUNCTION BOX. REFER TO E-102 FOR NEW LIGHTING LAYOUT.
  - EXISTING LIGHT FIXTURES ON EMERGENCY CIRCUIT SHALL BE REMOVED. EXISTING EMERGENCY LIGHTING BRANCH CIRCUIT "ELH1-18" SERVING DEMOLITION LIGHT FIXTURES SHALL BE REMOVED TO THE NEAREST LIVE CIRCUIT JUNCTION BOX. REFER TO E-102 FOR NEW LIGHTING LAYOUT. EC SHALL FIELD COORDINATE FOR EXACT EMERGENCY PANELBOARD LOCATION.
  - EXISTING LOCAL SWITCH CONTROL "c", "d", "e", "f", "g" SHALL BE REMOVED. REFER TO E-102 FOR NEW LIGHTING CONTROL REQUIREMENTS.
  - EXISTING SPEAKERS SHALL BE REMOVED AND WIRE BACK TO SOURCE. REFER TO E-102 FOR NEW SPEAKERS LOCATIONS AND OTHER REQUIREMENTS.

**1** LEVEL 2 - DEMOLITION LIGHTING PLAN  
ED-101 SCALE: 1/8" = 1'-0"



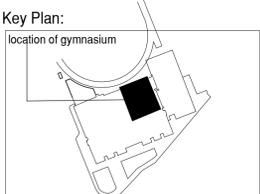
- NOTES:**
- REFER TO E-001 FOR GENERAL DEMOLITION NOTES AND OTHER REQUIREMENTS.
  - LIGHT FIXTURES SHALL BE TIED TO EXISTING NORMAL LIGHTING BRANCH CIRCUITS "LH2-13, LH2-15" AND CONTROLLED BY NEW SWITCH WITH 4 BUTTONS CONFIGURATION. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS AND OTHER REQUIREMENTS.
  - LIGHT FIXTURES ON EMERGENCY CIRCUIT SHALL BE TIED TO EXISTING EMERGENCY LIGHTING BRANCH CIRCUIT "ELH1-18" AND CONTROLLED BY NEW 4 BUTTON SWITCH WITH AN ADDITIONAL UNSWITCH CONDUCTOR. REFER TO DETAIL SHEET FOR TRANSFER SWITCH. EC SHALL FIELD COORDINATE FOR EXACT EMERGENCY PANELBOARD LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS AND OTHER REQUIREMENTS.
  - PROVIDE NEW WALL SWITCH WITH 4 BUTTONS CONFIGURATION.
  - PROVIDE NEW WALL MOUNTED JUNCTION BOXES FOR SPEAKER'S INFRASTRUCTURE (PROVIDED BY OTHERS) WITH STAINLESS STEEL CAGES PROTECTION. SPEAKERS SHALL BE WIRED TO EXISTING SOUND SYSTEM LOCATED AT THE STORAGE ROOM. COORDINATE WITH OWNER AND AV CONTRACTOR FOR JUNCTION BOX SIZE AND OTHER REQUIREMENTS.
  - PROVIDE NEW OCCUPANCY SENSOR WITH DUAL TECHNOLOGY (ULTRASONIC AND INFRARED), ADJUST SENSIVITY COVERAGE AS REQUIRED.

CONSULTANTS

Revision:  
Date: By: Description:

CLIENT AND/OR PROJECT INFO.

**CHELSEA HIGH SCHOOL**  
**299 EVERETT AVE.**  
**CHELSEA, MA**



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

**1** LEVEL 2 - LIGHTING PLAN  
E-102 SCALE: 1/8" = 1'-0"

Jacobs Project No.: R7W71636

Drawing Title:  
**ELECTRICAL -  
LEVEL 2  
LIGHTING PLAN**

Date: May 2015

Designed By: LE Drawing No.:

Drawn By: LE

Checked By: SS

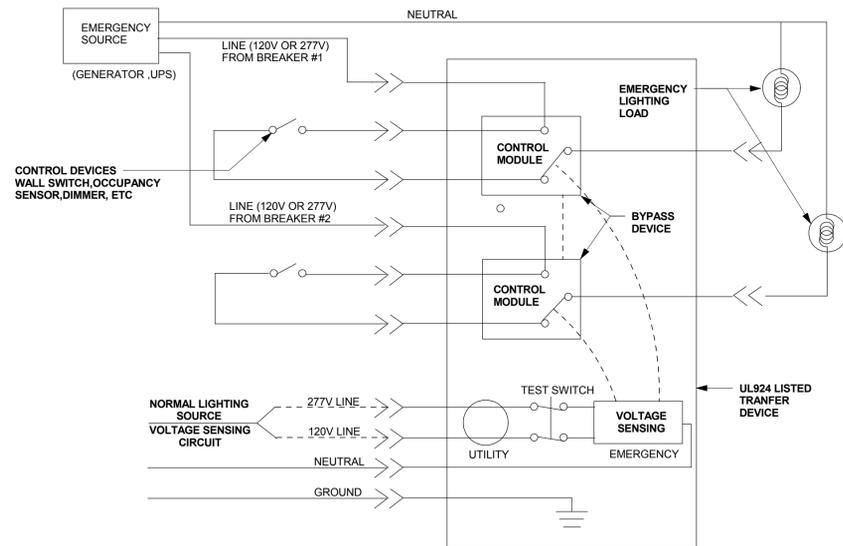
**LIGHTING FIXTURE SCHEDULE**

Fixture Type	Manufacturer	Catalog Number	Voltage	LED Data		Mounting	Description
				Color	Wattage		
A	XtraLight or approved equal	LHPLED206200X5AUINXXWGXXWRS W	277	3500	137	Pendant	Pendant mount LED high bay luminaire with wire guard protection. Thermal management for heat dissipation. Fixture includes field replaceable, individually mounted boards. Provide 13132 lumens output. Option A (Basis of design)
A-1	Visionaire Lighting	EL2-T5-144-350-4000-277-PM-WH	277	4000K	144	Pendant	Pendant mount LED high bay luminaire. Heavy-duty aluminum with heat radiating fins. Thermoset polyester powder coat painted finish. Prpvide 13588 lumens output. Option B
A-2	All green Lighting, Inc.	PM-LED-K-150-70-75-3K-WT-277	277	3500K	150	Pendant	Pendant mount LED high bay luminaire. Die Cast aluminum, whit polycarbonate plastic lens. High vibrat-vibration resistant. Provide 15500 lumens output. Option C
B	Esco Lighting, Inc.	FLL1571-20CREE-3800-48-72-4700K	277	4700K	48	Wall	Wall mounted LED sconces. Heavy duty die cast aluminum with corrosion resistant stainless steel hardware. Durable silicone gaskets seal. Impact resistant tempered glass lens. Provide 3800 lumens output.
B-1	Gmax	GMAXSPARK-40-WW	388	4500	37	Wall	Wall mounted LED sconces. Heavy duty die cast aluminum lamp ring oven painted, polished aluminum reflector bushhammered, aluminum heatsink, removable satin glass. Provide 4500 lumens output. Option B
B-2	SPI Lighting or approved equal	EIW11906L51.2WC-DML-277-PT02-3000K	277	3500	51.2	Wall	Wall mounted fluorescent sconces. Tempered diffuse glass lens. Thermoset polyester powder coat paint. Option C
<b>NOTES:</b>							
1	MANUFACTURER AND CATALOG NUMBER LISTED ARE PRIMARY SPECIFICATION AND INDICATE DESIGN INTENT. ALTERNATE MANUFACTURERS SUBMITTED MUST MEET CONSTRUCTION, OPERABILITY, PHOTOMETRIC AND AESTHETIC CRITERIA SET FORTH BY BASIS OF DESIGN PUBLISHED INFORMATION AND APPROVED EQUAL BY THE ENGINEER IN RECORD.						
2	IF MANUFACTURER IS NOT LISTED, THEY SHALL COMPLY WITH THE SUBSTITUTION SECTION OF THE SPECIFICATIONS.						
3	CONTRACTOR SHALL COORDINATE WITH FINAL APPROVED CEILING FINISH PRIOR TO ORDERING						
4	EC SHALL VERIFY FIXTURE MOUNTING, HEIGHT AND LOCATION AGAINST PLANS, ELEVATIONS AND DETAIL DRAWINGS. EXACT LOCATION OF FIXTURES SHALL BE COORDINATE WITH ARCHITECTURAL DRAWINGS PRIOR INSTALLATION.						

alternates

NOTES:

alternates



NOTES:

- SWITCHES EMERGENCY LIGHTING FULL-ON ON LOSS OF SENSING CIRCUIT VOLTAGE
- PROVIDE CHLORIDE LIGHTSTAR OR BODINE #GTD20A OR EQUAL

**1 EMERGENCY LIGHTING WITH CONTROL SWITCH**  
E-801 SCALE: 1" = 1'-0"

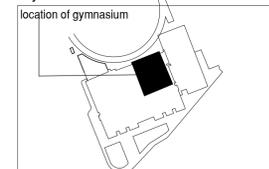
CONSULTANTS

Revision:  
Date: By: Description:

CLIENT AND/OR PROJECT INFO.

**CHELSEA HIGH SCHOOL**  
**299 EVERETT AVE.**  
CHELSEA, MA

Key Plan:



Scale: As indicated

Jacobs Project No.: R7W71636

Drawing Title:  
**ELECTRICAL  
DETAILS AND  
SCHEDULE**

Date: May 2015

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

Drawing No.:  
**E-801**

# HBS 300

360° High Bay Occupancy Sensor

**STEINEL**<sup>®</sup>  
PROFESSIONAL



Project Name:

Location:



## HBS 300 Specifications

Item No.	64131 (indv. packaged) 64130 (bulk)
Accessories	64304 LC4, Reduced Range Lens Cover 64305 LC5, 180° Half Moon Lens Cover 64307 EM1, Extender Module
Voltage	120/230/277 VAC, 50/60 Hz
Load Rating	120 VAC: 0-800 watt ballast, tungsten, 1/4 hp 230/277 VAC: 0-1200 watt ballast
Sensing Technology	passive infrared (PIR)
Time Delay Setting	15 seconds to 30 minutes
Light Level Setting	.2-200 footcandles 2-2000 lux
Environment	IP20 rated, -4°F to +122°F, -20°C to +50°C
Coverage	360° up to 22 ft (6.7 m) radial reach, up to 60 ft (18.2 m) tangential reach
Sensors	3 dual element infrared pyroelectric detectors
Lens Design	1416 switching zones
Dimensions (LxWxD)	3.9 x 3.9 x 2.6 in, 99 x 99 x 66 mm, nipple length .62 in (15.75 mm)
Warranty	5 years
Certifications	C-UL-US Listed, RoHS Compliant, CA Compliant

The HBS 300 High Bay Occupancy Sensor provides 360 degrees of occupancy based lighting control in high bay open area applications.

The sensor performs at a wide range of mounting heights, up to 45 ft. The EM1 Extender Module mounts directly to a high bay lighting fixture or junction box. With three highly sensitive pyroelectric detectors and a multi-segmented lens, the HBS 300 is able to achieve 1416 switching zones.

### Applications

High bay open areas where 360 degree coverage is desired, such as in warehouses, distribution centers, gymnasiums, and loading docks.

### Key Features:

- 360° coverage with up to 60 ft tangential reach
- Coverage area may be adjusted with plastic lens covers that snap to the front of the sensor
- 3 pyroelectric detectors with 1416 switching zones
- Automatically adjusts to temperature changes keeping sensitivity and coverage consistent
- Light level feature allows lighting to remain off during daylight regardless of occupancy
- Built-in surge protection with auto-reset

120/230/  
277V

Voltage

PIR

Passive Infrared Technology



360° Coverage Max 60 Ft

Fixture  
or J Box  
Mount

Fixture or Junction Box  
Mounting



0.2 - 200 fc

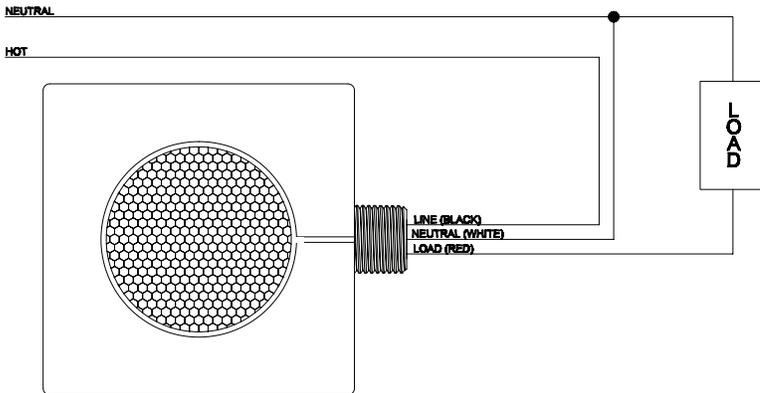


www.steinell.net

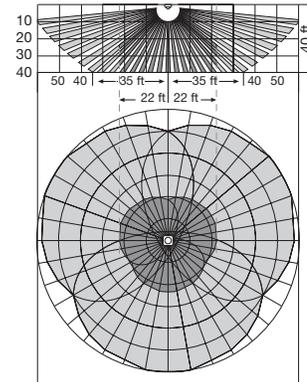
# HBS 300

360° High Bay Occupancy Sensor

## Wiring

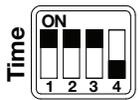
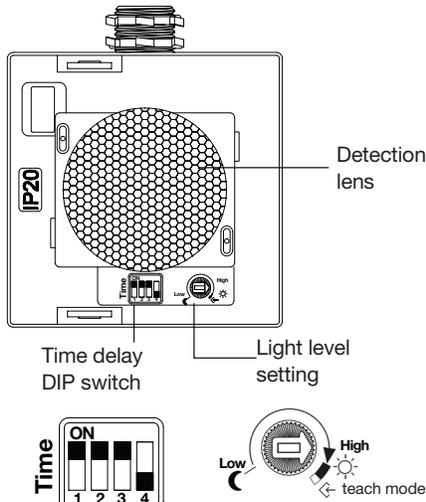


## Coverage



Typical mounting height is 8 to 45 ft. Maximum reach is 22 ft radial and 60 ft tangential. Coverage may vary depending on mounting height and environmental conditions.

## Setting

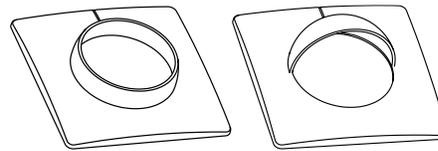


Time Delay DIP Switch

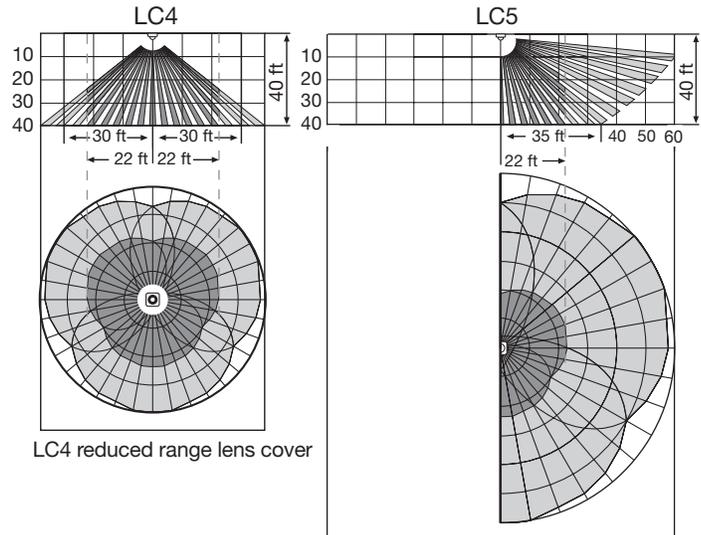
1	2	3	4	Time
ON	ON	ON	OFF	15 sec
ON	OFF	OFF	OFF	1 min
OFF	ON	ON	OFF	5 min
ON	OFF	ON	OFF	10 min
ON	ON	OFF	OFF	15 min
OFF	ON	OFF	OFF	20 min
OFF	OFF	ON	OFF	25 min
OFF	OFF	OFF	OFF	30 min
N/A	N/A	N/A	ON	override

Factory setting is 15 minutes.

## Coverage Adjustment



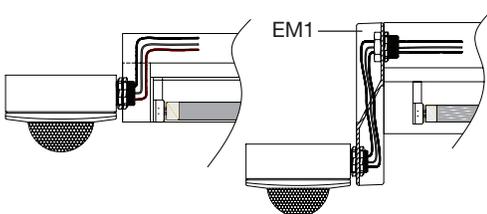
Lens covers can be used to adjust the HBS 300 coverage as needed. The covers are plastic and snap to the front of a sensor.



LC4 reduced range lens cover

LC5 180° half moon lens cover

## Mounting



The HBS 300 is mounted directly to a lighting fixture. The EM1 Extender Module is recommended if the knockout at the end of the fixture is located greater than 1/2" from the bottom edge of the fixture.

Project Name _____	Type _____
Catalog # _____	Date _____

# LED HIGH BAY PENDANT - ROUGH SERVICE



Shown with an optional wire guard.

## AT A GLANCE

**APPLICATION**  
**HIGH BAY/GYMNASIUM**

REPLACES	INPUT WATTS	LUMENS
<b>400W HID</b>	<b>137</b>	<b>13132</b>

### FEATURES

- Energy-efficient replacement for up to a 400W HID.
- Symmetrical, single pendant mount shape allows for even illumination and universal orientation.
- Improved lumen maintenance.
- Low wattage, high efficiency fixture utilizing patented LEDLinX® technology.

### CONSTRUCTION

- Utilizes advanced thermal management technology for rapid heat dissipation.
- Custom colors available.

### ELECTRICAL

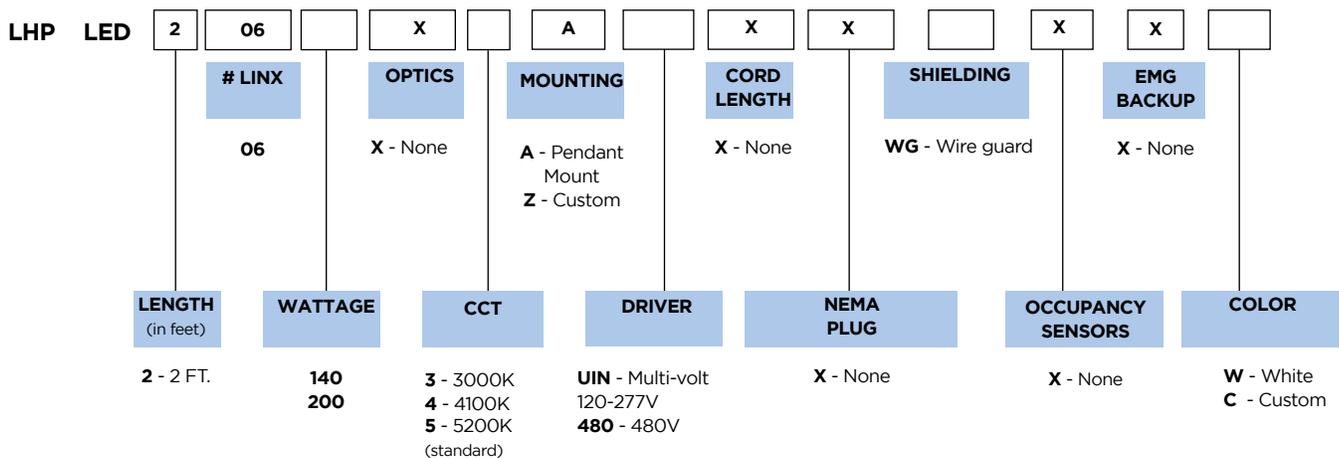
- LED Module - Six (6) LEDLinX® Modules.
- LEDLinX® modules individually replaceable via plug-in connector ensuring easy serviceability.
- Driver - 24VDC Class 2, constant current, electronic power supply factory calibrated to LED modules. Multi-volt 120-277V or 0-10V dimming option is available.
- Rated Life - >100,000 hours at 70% initial lumens (L<sub>70</sub>).
- Voltage - 120-277VAC input. Optional 480V.
- Complies with UL 1598/CSA 22.2. Damp and dry locations.
- Complies with the Buy American Act.

### WARRANTY

- 10 year limited warranty.

### ORDER LOGIC

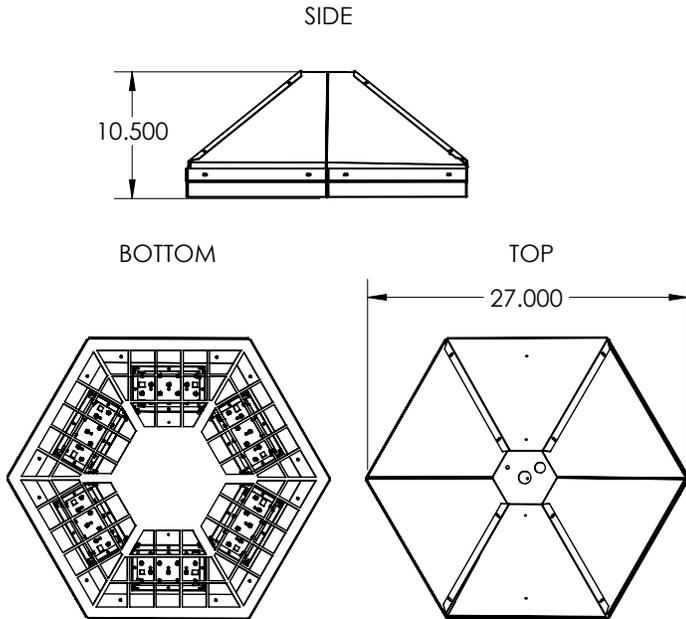
**DLC LISTED MODELS: LHPLED206140X5AUINXXWGXXWPP**



# LED HIGH BAY PENDANT - ROUGH SERVICE

LHP6-140-RS  
8.14.14

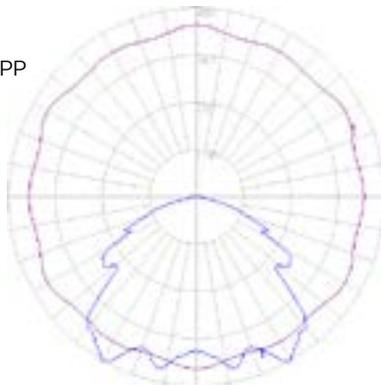
## DIMENSIONAL DATA



## PHOTOMETRIC DATA

### LHP LED 140W

**Catalog Number:** LHPLED206140X5AUINXXWGXXWPP  
**Report Number:** ATAL006056.ies  
**Issue Date:** 08/14/14  
**Prepared for:** XtraLight  
**ATA-LABS**  
**Lamp:** 6 modules w/ wireguard  
**Total Lumens:** 13132  
**IESNA:** LM-79-2008  
**Total Input Watts:** 135.52  
**Efficacy:** 96.1 Lm/W



### CANDELA DISTRIBUTION

	0	25	45	65	90
<b>0</b>	3715	3715	3715	3715	3715
<b>5</b>	3847	3856	3857	3848	3846
<b>15</b>	4344	4161	4301	4339	4128
<b>25</b>	4048	4113	3967	4021	4147
<b>35</b>	3036	4244	3962	3197	4272
<b>45</b>	3168	3281	2918	2937	3193
<b>55</b>	2629	2841	2400	2557	2754
<b>65</b>	1411	1824	1727	1526	1924
<b>75</b>	744	758	714	747	876
<b>85</b>	128	107	110	129	114
<b>90</b>	0	0	0	0	0

### ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
<b>0-30</b>	2408.97	26.00
<b>0-40</b>	5779.32	44.00
<b>0-60</b>	10513.19	80.10
<b>0-90</b>	13131.65	100.00
<b>90-180</b>	0.00	0.00
<b>0-180</b>	13131.65	100.00

### AVERAGE LUMINANCE

	0°	45°	90°
<b>45</b>	13315	12264	13420
<b>55</b>	13621	12435	14269
<b>65</b>	9922	12144	13530
<b>75</b>	8543	8198	10058
<b>85</b>	4365	3751	3887

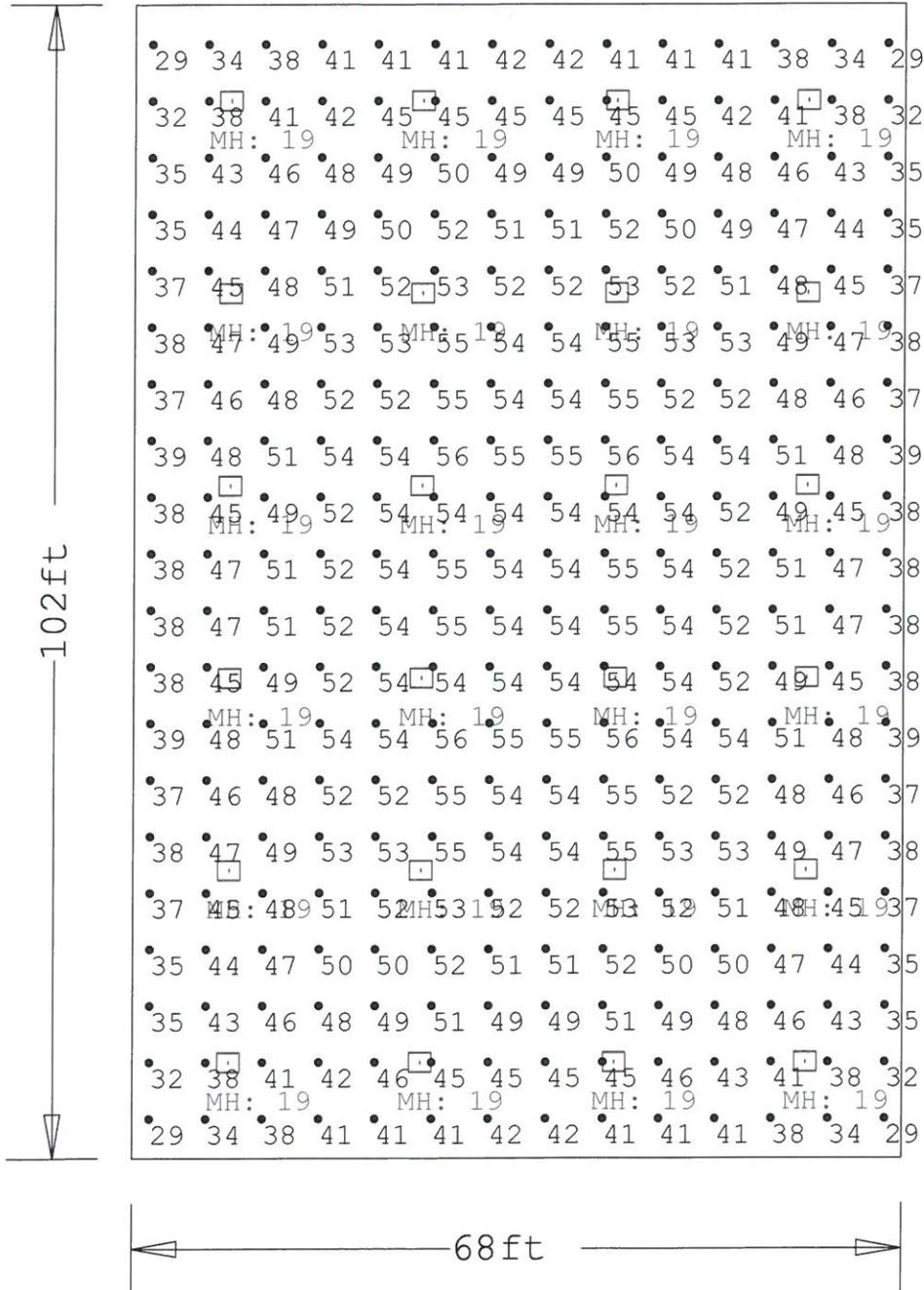
**NOTE:** Data shown is absolute for product shown.



**WORKING HARDER. LIGHTING SMARTER.®**

Luminaire Schedule				
Symbol	Qty	Label	Description	LLF
□	24	LHPLED206200X5AUINXXWGXXWRS W	LHPLED206200 Wire Guard	0.900

Reflectance:80/50/20



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
RoomEst 1 Workplane	Illuminance	Fc	46.98	56	29	1.62	1.93

XTRALIGHT