

Bunker Hill Community College

250 New Rutherford Ave.

Boston, MA 02129

Student Central Video Wall

1 – Advertisement for Bid

2 – Instructions

3 - General Proposal Form

4 – Insurance Requirements

5 – Performance and Payment Bond

6 – Sample Commonwealth of Massachusetts – Standard Contract Form

7 – Sample Commonwealth Terms and Conditions

8 – Commonwealth of Massachusetts Prevailing Wage Rates

9 – Student Central Video Wall Plans

10 – Student Central Video Wall Specifications

11 – AV Appendix 1

**Notice to Contractors
Classified Legal Advertisement**

**Commonwealth of Massachusetts
Bunker Hill Community College**

Request for Proposal for BHCC – Student Central Video Wall

Sealed proposals submitted on a form furnished by BHCC included in the instruction and proposal package and the electronic form included in the specifications provided by AKF and clearly identified as a Proposal with the following information on the envelope:

**Bunker Hill Community College
250 New Rutherford Avenue
Boston, MA 02129**

**Proposal Documents for BHCC – Student Central Video Wall
Name and address of the Bidder**

Proposals will be received at
Bunker Hill Community College, Room E120, 250 New Rutherford Ave., Boston, MA 02129

Not later than:
2:00 PM September 6, 2019

Informational Meeting and Site Inspection will be held on Friday, August30, 2019 at 10:00 AM in the B – building 2nd floor lobby - Bunker Hill Community College, 250 New Rutherford Avenue, Boston, MA 02129

Project Location: Bunker Hill Community College, 250 New Rutherford Avenue, Boston MA 02129.

Project Plan Identification: AKF Bunker Hill Community College 181010
AKF | One Liberty Plaza, 165 Broadway 22nd Floor, New York, New York 10006

Plans and Specifications will be available:
August 16, 2019

Construction Start Date: September 23, 2019
Construction End Date: December 31, 2019

Minimum rates of wages to be paid on the project have been determined by the Commissioner of the Division of Occupational Safety under the provisions of Sections 26 and 27 Chapter 139 of the General Laws.

Copies of Bid Documents may be obtained: COMBUYS

Instructions

BHCC – Student Central Video Wall Instructions

A.1 Respondents Corporate Information:

1. Legal name of Respondent's firm and corporate ownership
2. Legal status – i.e. corporation, partnership, etc.
3. State or county where organized
4. Address of Respondent's principle place of business
5. Federal I.D. Number
6. Commonwealth of Massachusetts Registration and/or Registered Agent
7. Website address

A.2 Local Management:

Please provide the name(s) and contact information for:

1. Vice President of Operations
2. Regional Manager
3. Account Manager
4. Loss Prevention/Risk Manager

A.3 Personnel Conflicts of Interest:

Indicate any employees, officers, directors, members, agents or consultants of Respondent who are related to any employee, officer or director of BHCC (Bunker Hill Community College).

A.4 Relevant Litigation/Investigations:

Describe any current public lawsuits, legal actions or governmental investigations including, but not limited to, parties of dispute, and equipment affected, cause of action, jurisdiction and date of legal complaint. Include in this section any loss of licensing or certification that your firm or its personnel have experienced in the past five (5) years.

A.5 Restructuring & Mergers:

Describe any specific restructuring, mergers, or corporate name changes within Respondent's firm that has occurred during the past three years or is anticipated in the next three years, noting potential impacts to the products and services contemplated by this RFP (Request for Proposal).

A.6 Bankruptcy:

Provide information relating to Respondent bankruptcies or reorganizations with the last five (5) years.

A.7 Business Class (indicate all that apply)

1. Women Owned Business
2. Disabled Veterans Owned Business
3. Veteran Owned Business
4. Minority Owned Business

A.7.1 Third Party Certification:

1. Provide name of certifying agency (Federal, State, Municipal Government, SBA or other)
2. Certificate number
3. Copy of Certification

Instructions

B.1 Sustainability Initiatives:

Provide information concerning Respondent’s purchase and use of “green” products. Describe companywide sustainability initiatives or attach policy. Provide contact information for Sustainability Director within your organization.

C.1 Respondent’s Qualifications, References, Experience and Past Performance:

1. Describe your current business practice in the education market.
2. Provide a list of 3 – 5 clients with contact information who will attest to your performance.
3. Note similar experience within the past five years in the education market.

C.2 Implementation and Communications Plan:

Provide a detailed implementation plan to meet the goal of construction commencement **September 23, 2019** with a completion date of **December 31, 2019**.

Include in your implementation plan your “Continuity of Operations Plan” in the event of manmade or natural disaster that may have a temporary adverse effect on BHCC and/or the surrounding community.

D.1 Financial Statements:

Provide current audited Financial Statement for year ending 2018

E.1 Insurance:

1. Workers Compensation:

- a. Worker's Compensation Insurance covering all persons employed for the performance of this Contract shall be provided by the individual or company submitting the proposal pursuant to the Laws of the Commonwealth of Massachusetts.

2. General Liability:

- a. General Liability Insurance, with Bunker Hill Community College, named insured, shall be in place for the duration of the Contract with limits of \$1,000,000 for each occurrence and \$2,000,000 aggregate. A Certificate of Insurance shall be provided on an annual basis to BHCC.

3. Motor Vehicle:

- a. The individual or company submitting this proposal will provide motor vehicle insurance with coverage for medical and property damage with limits of not less than \$1,000,000 for each vehicle provided to satisfactorily perform the Contract.

4. Builders Risk / Installed Materials / Stored Materials:

- a. The contractor shall purchase and maintain coverage against loss or damage on all Work included in this Contract in an amount equal to the Contract Price.

5. Umbrella Coverage:

- a. The contractor shall provide Umbrella Coverage in the following amount:

<u>Contract Price</u>	<u>Limit of Liability</u>
Under \$1,000,000	\$2,000,000 each occurrence
\$1,000,001 - \$5,000,000	\$5,000,000 each occurrence

6. Contractor’s Pollution Liability:

- a. The contractor shall purchase and maintain coverage for bodily injury and property resulting from loss or injury due to hazards including but not limited to: asbestos, lead paint, contaminated soil.

Instructions

Limit of Liability \$1,000,000 each occurrence
 \$3,000,000 aggregate

F.1 Bond:

1. Bid Bond

- a. Each individual or company submitting a proposal shall furnish a letter from a bank or surety company equal to five percent (5%) of the contract price in the form of a bid bond. The effective date of the bid bond shall be the published date of the public bid opening noted elsewhere in this document.

2. Performance Bond:

- a. Each individual or company submitting a proposal shall furnish a letter from a bank or surety company equal to one hundred percent (100%) of the contract price in the form of a performance bond. The effective date of the performance bond shall be the date of Contract execution and shall remain in place for the duration of the Contract.

H1. Submission of Proposal:

1. The completed proposal for: **BHCC – Student Central Video Wall** shall be submitted not later than **2:00 PM September 6, 2019 for Proposals.**
2. Please label the sealed bid package as follows:

**Bunker Hill Community College
Facilities Department Room E120
250 New Rutherford Ave.
Boston, MA 02129**

**Proposal Documents for BHCC – Student Central Video Wall
Name and address of the Respondent**

Any and all proposals **NOT** submitted in the requested format by **2:00 PM September 6, 2019** shall be rejected and discarded.

I1. Modification or Withdrawal of Proposals:

1. Each individual or company submitting a proposal may correct, modify, or withdraw the proposal by providing written notice received by Bunker Hill Community College prior to the time and date set for the opening.
2. Proposal modifications must be submitted in a sealed envelope clearly labeled "Modification No. ___". Each modification must be numbered in sequence, and must reference the original RFP entitled: ***BHCC – Student Central Video Wall***
3. The completed modifications must be submitted to: **Facilities Department Room E120, Bunker Hill Community College 250 New Rutherford Ave. Boston, MA 02129**
4. After the opening, a respondent may not change any provision of the proposal in a manner prejudicial to the interests of the College or fair competition.

Instructions

J1. Bunker Hill Community College Conditions:

1. BHCC (Bunker Hill Community College) reserves the right to cancel the Proposal if it determines that it is in the best interest of the College.
2. BHCC will not be held liable for any costs incurred by Respondents in the preparation and production of the proposal or the costs of any services performed prior to receiving approval and award of the Contract.
3. All documents submitted in conjunction with the RFP shall become the property of Bunker Hill Community College and will not be returned.
4. BHCC reserves the right to amend the specifications of this RFP after its release. All interested parties will be notified in writing (via email) of any and all amendments to the specifications contained in the RFP.
5. Wherever the College is referred to herein, such reference will be to the President or his/her designee, as stated periodically in writing during the term of the contract.
6. Individuals or companies, who submit a proposal for consideration, may be required to give an oral presentation to (PMT) Procurement Management Team. This will be at the sole discretion of the PMT.
7. By submitting a proposal, the individual or company agrees that it will not make any claims or have any right to damages because of misinterpretation or misunderstanding of the specifications or because of any misinformation or lack of information.
8. The individual or company determined to be the most responsive and qualified will be notified of the award in writing. All other Respondents will be notified via email.
9. Omission of required information or misrepresentation of information included in the proposal submitted by an individual or company or false statements made during any communication with BHCC will be sufficient cause for rejection of the bid.

K1. The Contract, if awarded, shall be governed in accordance with the laws of the Commonwealth of Massachusetts: **Commonwealth of Massachusetts – Standard Contract Form and Commonwealth Terms and Conditions**

L1. Proposal Opening:

1. Sealed proposals will be opened by the PMT (Procurement Management Team) on **September 6, 2019 at 2:01 PM in Room E 120 Bunker Hill Community College, 250 New Rutherford Ave., Boston, MA 02129.**
2. The proposals will be evaluated on basis of qualified documents submitted in response to all sections of the RFP, Attachments and Addenda.
3. The successful company will be notified in writing within 30 days of the bid opening date.
4. The selected company will be required to execute the Contract and submit the required Performance Bond within five (5) business days or a mutually agreed upon time not to exceed ten (10) business days from receipt of written notification of Contract award.

Instructions

M1. Proposal Evaluation and Award Criteria:

1. The PMT (Procurement Management Team) has the right to award the contract on the basis of the most economically advantageous proposal for **BHCC – Student Central Video Wall** received by Bunker Hill Community College.

2. The evaluation criteria include:
 - a. Price
 - b. Quality
 - c. Technical merit
 - d. Aesthetic and functional characteristics
 - e. Environmental characteristics
 - f. Operational cost
 - g. Cost effectiveness
 - h. Delivery and implementation date
 - i. Social considerations
 - j. Sustainability
 - k. Innovation

3. Definitions:
 1. Exceeds the required standard; responsive, precise, complete and relevant; improvement to current services through added value
 2. Meets the required standard; comprehensive response
 3. Meets the standard in most areas; acceptable level of detail, accuracy
 4. Fails to meet the standard in most areas; limited information, partial
 5. Significantly fails to meet the standard; inadequate detail, incomplete
 6. Completely fails to meet the standard; no further evaluation

General Proposal Form

FORM FOR GENERAL BID

To the Awarding Authority: **Bunker Hill Community College**

A. The Undersigned proposes to furnish all labor and materials required for: **Bunker Hill Community College, BHCC – Student Central Video Wall, 250 New Rutherford Avenue, Boston, MA 02129 Boston, Massachusetts**, in accordance with the accompanying plans and specifications prepared by: **AKF, One Liberty Plaza, 165 Broadway, 22nd Floor, New York, New York** for the contract price specified below, subject to additions and deductions according to the terms of the specifications.

B. This proposal includes addenda numbered _____

C. The proposed contract price is _____ dollars (\$_____).

For alternate No. _____ Add \$ _____; Subtract _____
(Repeat preceding line for each alternate)

D. The undersigned agrees that, if he is selected as general contractor, he will within five days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this proposal and furnish a performance bond and also a labor and materials or payment bond, each of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority and each in the sum of the contract price, the premiums for which are to be paid by the general contractor and are included in the contract price; provided, however, that if there is more than 1 surety company, the surety companies shall be jointly and severally liable.

The undersigned hereby certifies that 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; that 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 that he will comply fully with all laws and regulations applicable to awards made by an agency of the Commonwealth of Massachusetts.

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

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

End of page 1

General Proposal Form

(Date)

(Name of Company)

By _____
(Name of Person Signing Proposal and Title)

(Business Address)

(City and State)

End of page 2

Insurance Requirements

Insurance Requirements

1. Insurance Generally:

- A. The Contractor shall purchase and maintain insurance of the type and limits listed in this Article with respect to the operations as well as the completed operations of this Contract. This insurance shall be provided at the Contractor's expense and shall be in full force and effect for the full term of the Contract or for such longer period as this Article requires.
- B. All policies shall be written on an occurrence basis and be issued by companies lawfully authorized to write that type of insurance under the laws of the Commonwealth with a financial strength rating of A- or better as assigned by AM Best Company, or an equivalent rating assigned by a similar rating agency acceptable to the Awarding Authority, or otherwise acceptable to the Awarding Authority.
- C. Contractor shall submit three originals of each certificate of insurance, acceptable to the Awarding Authority, simultaneously with the execution of this Contract. Certificates shall show each type of insurance, insurance company, policy number, amount of insurance, deductibles and/or self-insured retentions, and policy effective and expiration dates. Certificates shall show the Awarding Authority, the Owner and anyone else the Awarding Authority requests as an additional insured as to all policies of liability insurance. Certificates shall specifically note the following:
 1. that the automobile liability, umbrella liability and pollution liability policies include the Awarding Authority as an additional insured;
 2. that all policies include the coverage and endorsements in accordance with the terms and conditions as required by this construction contract;
 3. that the Builders' Risk or Installation Floater is on an all risk basis including earthquake and flood, and includes the Awarding Authority as a named insured or loss payee as their interests may appear; and
 4. that none of the coverages shall be cancelled, terminated, or materially modified unless and until 30 days prior notice is given in writing to the Awarding Authority.
 5. Contractor shall submit updated certificates prior to the expiration of any of the policies referenced in the certificates so that the Awarding Authority shall at all times possess certificates indicating current coverage.
- D. The Contractor shall file one certified complete copy of all policies and endorsements with the Awarding Authority within sixty days after Contract award. If the Awarding Authority is damaged by the Contractor's failure to maintain such insurance and to comply with the terms of this Article, then the Contractor shall be responsible for all costs and damages to the Awarding Authority attributable thereto.
- E. Termination, cancellation, or material modification of any insurance required by this Contract, whether by the insurer or the insured, shall not be valid unless written notice thereof is given to the Awarding Authority at least thirty days prior to the effective date thereof, which shall be expressed in said notice.
- F. The Contractor is responsible for the payment of any and all deductibles under all of the insurance required below. The Awarding Authority shall not in any instance be responsible for the payment of deductibles, self-insured retentions, or any portion thereof.

Insurance Requirements

2. Contractor's Commercial General Liability:

- A. The Contractor shall purchase and maintain general liability coverage on the ISO form CG 00 01 or equivalent, including products and completed operations, on an occurrence basis. The form must be amended to state that the aggregate limit applies on a per location/project basis. The policy shall provide the following minimum coverage to protect the Contractor from claims with respect to the operations performed by Contractor and any employee, subcontractor, or supplier, or by anyone for whose acts they may be liable unless a higher coverage is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the additional coverage:

Bodily Injury & Property Damage	\$1,000,000 each occurrence
Products & Completed Operations	\$2,000,000 general aggregate per project
Personal & Advertising Injury	\$1,000,000 annual aggregate
Medical Expenses	\$1,000,000 each occurrence
	\$5,000

- B. This policy shall include coverage relating to explosion, collapse, and underground property damage.
- C. This policy shall include contractual liability coverage.
- D. The completed operations coverage shall be maintained for a period of three (3) years after Substantial Completion and acceptance by the Awarding Authority. The Contractor shall provide renewal certificates of insurance to the Awarding Authority as evidence that this coverage is being maintained.
- E. If the Work includes work to be performed within 50 feet of a railroad, any exclusion for liability assumed under contract for work within 50 feet of a railroad shall be deleted.
- F. This policy shall include the Awarding Authority, the Owner and anyone else requested by the Awarding Authority as an additional insured via endorsements CG 20 10 for ongoing operations and CG 20 37 for completed operations. This policy shall be primary and non-contributory with respect to any other insurance available to additional insureds.
- G. The policy shall include endorsement CG 24 04, a Waiver of Subrogation in favor of the Awarding Authority and Owner.

3. Automobile Liability:

- A. The Contractor shall purchase and maintain the following minimum coverage with respect to the operations of any owned, non-owned, and hired vehicles including trailers used in the performance of the work, unless a higher coverage is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the additional coverage:

Bodily Injury & Property Damage	\$1,000,000 combined single limit
---------------------------------	-----------------------------------

- B. The policy shall include a CA 99 48 Broadened Pollution Endorsement. If specified in Exhibit A to the Owner – Contractor Agreement, the Contractor, if hauling contaminants and/or pollutants, must adhere to Sections 29 and 30 of the Motor Carrier Act of 1980, which shall include coverage Form MCS-90.

Insurance Requirements

- C. The policy shall name the Awarding Authority and Owner as additional insureds.
- D. The policy shall contain a Waiver of Subrogation in favor of the Awarding Authority and Owner.

4. Contractor's Pollution Liability:

The Contractor shall purchase and maintain coverage for bodily injury and property damage resulting from liability arising out of pollution related exposures such as asbestos abatement, lead paint abatement, tank removal, removal of contaminated soil, etc. The insurance policy shall cover the liability of the Contractor during the process of removal, storage, transport and disposal of hazardous waste and contaminated soil and/or asbestos abatement.

The policy shall include coverage for on-Site and off-Site bodily injury and loss of, damage to, or loss of use of property, directly or indirectly arising out of the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gas, waste materials or other irritants, contaminants or pollutants into or upon the land, the atmosphere or any water course or body of water, whether it be gradual or sudden and accidental. The policy shall also include defense and clean-up costs.

The Awarding Authority and Owner shall be named as an additional insureds and coverage must be on an occurrence basis. The amount of coverage shall be as follows unless a higher amount is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the additional coverage:

Limit of liability	\$1,000,000 per occurrence
	\$3,000,000 aggregate

5. Worker's Compensation:

- A. The Contractor shall provide the following coverage in accordance with M.G.L. c.149 §34A and c.152 as amended, unless a higher coverage is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the higher coverage:

Worker's Compensation	Statutory limits
Employer's Liability	\$ 500,000 each accident
\$ 500,000 disease per employee	
\$ 500,000 disease policy aggregate	

- B. The policy shall contain a Waiver of Subrogation in favor of the Awarding Authority and Owner.

6. Builder's Risk/ Installation Floater/Stored Materials:

- A. The Contractor shall purchase and maintain coverage against loss or damage on all Work included in this Contract in an amount equal to the Contract Price. Such coverage shall be written on an all risks basis or equivalent form and shall include, without limitation, insurance against perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, terrorism ("certified" and "non-certified"), collapse, earthquake, flood (if the project is not in an "A" or a "V" flood Zone), windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss. Unless otherwise specified in this Contract, the limits for earthquake and flood shall be the lesser of the Contract Price or \$10,000,000. This policy and/or installation floater shall include transportation and Stored Materials coverage in an amount equal to the value of the stored materials as required in C. below.

Insurance Requirements

- B. When Work will be completed on existing buildings owned by the Owner, the Contractor shall provide an installation floater, in the full amount of the Contract Price. Such coverage shall be written on an all risks basis or equivalent form and shall include, without limitation, insurance against perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood (if the project is not in an "A" or a "V" flood Zone), windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss. Unless otherwise specified in this Contract, the limits for earthquake and flood shall be the lesser of the Contract Price or \$10,000,000. This policy and/or installation floater shall include transportation and Stored Materials coverage in an amount equal to the value of the stored materials as required in C. below.
- C. The Contractor shall maintain insurance on delivered and/or stored material designated to be incorporated in the Work against fire, theft or other hazards. Any loss or damage of whatever nature to such material while stored at an off Site location shall be forthwith replaced by the Contractor at no expense to the Awarding Authority.
- D. The policy or policies shall specifically state that they are for the benefit of and payable to the Awarding Authority, the Owner, the Contractor, and all persons furnishing labor or labor and materials for the Contract Work, as their interests may appear. The policy or policies shall list the Awarding Authority, the Owner, the Contractor, and Subcontractors of any tier as named insureds.
- E. Coverage shall include any costs for work performed by the Designer or any consultant as the result of a loss experienced during the term of this Contract.
- F. Coverage shall include permission for temporary occupancy and a Waiver of Subrogation in favor of the Awarding Authority and Owner
- G. Coverage shall be maintained until final acceptance by the Awarding Authority and Owner of the Contract and final payment has been made.
- H. A loss under the property insurance shall be adjusted by the Contractor as fiduciary and made payable to the Contractor as fiduciary for the insureds. The Contractor shall pay the subcontractors their just shares of insurance proceeds received by the Contractor and shall require subcontractors to make payments to their sub-subcontractors in similar manner.

7. Umbrella Coverage:

The Contractor shall provide Umbrella Coverage in a form at least as broad as primary coverages required by Sections 2, 3 and 5 of this Article in the following amount unless a higher amount is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the higher amount:

<u>Contract Price:</u>	<u>Limit of Liability:</u>
Under \$1,000,000	\$2,000,000 per occurrence
\$1,000,001 -- \$5,000,000	\$5,000,000 per occurrence
\$5,000,001-- \$10,000,000	\$10,000,000 per occurrence
\$10,000,001 and over	\$25,000,000 per occurrence

Insurance Requirements

8. Additional Types of Insurance:

The Contractor shall provide such other types of insurance as may be required by Exhibit A to the Owner - Contractor Agreement.

Indemnification

Generally:

To the fullest extent permitted by law, the Contractor shall indemnify, defend (with counsel subject to the supervision of the Attorney General of the Commonwealth of Massachusetts as required by M.G.L. c. 12, s. 3) and hold harmless the Owner, Awarding Authority and Designer and their officers, agents, divisions, agencies, employees, representatives, successors and assigns from and against all claims, damages, losses and expenses, including but not limited to court costs and attorneys' fees, arising out of or resulting from the performance of the Work, including but not limited to those arising or resulting from:

- labor performed or furnished and/or materials used or employed in the performance of the Work;
- violations by Contractor, any Subcontractor, or by any person directly or indirectly employed or used by any of them in the performance of the Work or anyone for whose acts any of them may be liable (Contractor, subcontractor and all such persons herein collectively called "Contractor's Personnel") of any Laws;
- violations of any provision of this Contract by any of Contractor's Personnel;
- injuries to any persons or damage to any property in connection with the Work;
- any act, omission, or neglect of Contractor's Personnel.

The Contractor shall be obligated as provided above, regardless of whether or not such claims, damages, losses and/or expenses, are caused in whole or in part by the actions or inactions of a party indemnified hereunder. In any and all claims by Contractor's Personnel against parties indemnified hereunder, the Contractor's indemnification obligation set forth above shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Article XV.

2. Designer's Actions:

The obligations of the Contractor under Section 1 above shall not extend to the liability of the Designer, its agents or employees, arising out of (i) the preparation or approval of maps, Drawings, opinions, reports, surveys Change Orders, designs or specifications, or (ii) the giving of or the failure to give directions or instructions by the Designer, its agents to employees provided such giving or failure to give is the primary cause of the injury or damage.

3. Survival:

The provisions of this Article XV are intended to survive Final Acceptance and/or any termination of this Contract.

Performance and Payment Bond

Performance and Payment Bond:

1. Contractor Bonds:

A. The Contractor shall provide performance and payment (labor and materials) bonds in the form provided by the Awarding Authority, executed by a surety licensed by the Commonwealth of Massachusetts Division of Insurance. Each such bond shall be in the amount of the Contract Price.

B. If at any time prior to final payment to the Contractor, the Surety:

- is adjudged bankrupt or has made a general assignment for the benefit of its creditors;
- has liquidated all assets and/or has made a general assignment for the benefit of its creditors;
- is placed in receivership;
- otherwise petitions a state or federal court for protection from its creditors; or
- allows its license to do business in Massachusetts to lapse or be revoked;

then the Contractor shall, within 21 days of any such action listed above, provide the Awarding Authority with new performance and payment bonds as described in Paragraph A above. Such bonds shall be provided solely at the Contractor's expense.

COMMONWEALTH OF MASSACHUSETTS ~ STANDARD CONTRACT FORM



This form is jointly issued and published by the [Executive Office for Administration and Finance \(ANF\)](#), the [Office of the Comptroller \(CTR\)](#) and the [Operational Services Division \(OSD\)](#) as the default contract for all Commonwealth Departments when another form is not prescribed by regulation or policy. Any changes to the official printed language of this form shall be void. Additional non-conflicting terms may be added by Attachment. Contractors may not require any additional agreements, engagement letters, contract forms or other additional terms as part of this Contract without prior Department approval. Click on hyperlinks for definitions, instructions and legal requirements that are incorporated by reference into this Contract. An electronic copy of this form is available at www.mass.gov/osc under [Guidance For Vendors - Forms](#) or www.mass.gov/osd under [OSD Forms](#).

CONTRACTOR LEGAL NAME: (and d/b/a):		COMMONWEALTH DEPARTMENT NAME: MMARS Department Code:	
Legal Address: (W-9, W-4, T&C):		Business Mailing Address:	
Contract Manager:		Billing Address (if different):	
E-Mail Address:		Contract Manager:	
Phone:	Fax:	E-Mail Address:	E-Mail Address 2:
Contractor Vendor Code: Payment Address Code: (e.g. "AD001") AD0 ____.		Phone:	
Is this Payment Address Code set up for EFT? <input type="checkbox"/> Yes <input type="checkbox"/> No. (If "No" the Contractor must attach EFT paperwork)		Fax:	
NEW CONTRACT PROCUREMENT OR EXCEPTION TYPE: (Check one option only) <input type="checkbox"/> Statewide Contract (OSD or an OSD-designated Department) <input type="checkbox"/> Collective Purchase (Attach OSD approval, scope, budget) <input type="checkbox"/> Department Procurement (includes State or Federal grants 815 CMR 2.00) (Attach RFR and Response or other procurement supporting documentation) <input type="checkbox"/> Emergency Contract (Attach justification for emergency, scope, budget) <input type="checkbox"/> Contract Employee (Attach Employment Status Form , scope, budget) <input type="checkbox"/> Legislative/Legal Exemption or Other: (Attach authorizing language/justification, scope and budget)		CONTRACT AMENDMENT Enter Current Contract End Date <i>Prior</i> to Amendment: ____, 20 ____. Enter Amendment Amount: \$ _____. (or "no change") AMENDMENT TYPE: (Check one option only. Attach details of Amendment changes.) <input type="checkbox"/> Amendment to Scope or Budget (Attach updated scope and budget) <input type="checkbox"/> Interim Contract (Attach justification for Interim Contract and updated scope/budget) <input type="checkbox"/> Contract Employee (Attach any updates to scope or budget) <input type="checkbox"/> Legislative/Legal Exemption or Other: (Attach authorizing language/justification and updated scope and budget)	
The following COMMONWEALTH TERMS AND CONDITIONS (T&C) has been executed, filed with CTR and is incorporated by reference into this Contract. <input type="checkbox"/> Commonwealth Terms and Conditions <input type="checkbox"/> Commonwealth Terms and Conditions For Human and Social Services			
COMPENSATION: (Check ONE option): The Department certifies that payments for authorized performance accepted in accordance with the terms of this Contract will be supported in the state accounting system by sufficient appropriations or other non-appropriated funds, subject to intercept for Commonwealth owed debts under 815 CMR 9.00. <input type="checkbox"/> Rate Contract (No Maximum Obligation. Attach details of all rates, units, calculations, conditions or terms and any changes if rates or terms are being amended.) <input type="checkbox"/> Maximum Obligation Contract Enter Total Maximum Obligation for total duration of this Contract (or <i>new</i> Total if Contract is being amended). \$ _____.			
PROMPT PAYMENT DISCOUNTS (PPD): Commonwealth payments are issued through EFT 45 days from invoice receipt. Contractors requesting accelerated payments must identify a PPD as follows: Payment issued within 10 days ____ % PPD; Payment issued within 15 days ____ % PPD; Payment issued within 20 days ____ % PPD; Payment issued within 30 days ____ % PPD. If PPD percentages are left blank, identify exemption: __ statutory/legal or Ready Payments (G.L. c. 29, § 23A); __ federal grant/trust; __ initial payment (subsequent payments must be scheduled to support payee cash flow needs and standard EFT 45 day payment cycle. See Prompt Pay Discounts Policy .)			
BRIEF DESCRIPTION OF CONTRACT PERFORMANCE or REASON FOR AMENDMENT: (Enter the Contract title, purpose and a detailed description of the scope of performance or what is being amended for a Contract Amendment. Attach all supporting documentation.)			
ANTICIPATED START DATE: (Complete ONE option only) The Department and Contractor certify for this Contract, or Contract Amendment, that Contract obligations: <input type="checkbox"/> 1. may be incurred as of the Effective Date (latest signature date below subject to any required approvals) and no obligations have been incurred prior to the Effective Date . <input type="checkbox"/> 2. may be incurred as of ____, 20 ____, a date LATER than the Effective Date below and no obligations have been incurred prior to the Effective Date . <input type="checkbox"/> 3. were incurred as of ____, 20 ____, a date PRIOR to the Effective Date below, and the parties agree that payments for any obligations incurred prior to the Effective Date are authorized to be made either as settlement payments or as authorized reimbursement payments, and that the details and circumstances of all obligations under this Contract are attached and incorporated into this Contract. Acceptance of payments forever releases the Commonwealth from further claims related to these obligations.			
CONTRACT END DATE: Contract performance shall terminate as of ____, 20 ____, with no new obligations being incurred after this date unless the Contract is properly amended, provided that the terms of this Contract and performance expectations and obligations shall survive its termination for the purpose of resolving any claim or dispute, for completing any negotiated terms and warranties, to allow any close out or transition performance, reporting, invoicing or final payments, or during any lapse between amendments.			
CERTIFICATIONS: Notwithstanding verbal or other representations by the parties, the " Effective Date " of this Contract or Amendment shall be the latest date that this Contract or Amendment has been executed by an authorized signatory of the Contractor, the Department, or a later Contract or Amendment Start Date specified above, subject to any required approvals. The Contractor makes all certifications required under the attached Contractor Certifications (incorporated by reference if not attached hereto) under the pains and penalties of perjury, agrees to provide any required documentation upon request to support compliance, and agrees that all terms governing performance of this Contract and doing business in Massachusetts are attached or incorporated by reference herein according to the following hierarchy of document precedence, the applicable Commonwealth Terms and Conditions , this Standard Contract Form including the Instructions and Contractor Certifications , the Request for Response (RFR) or other solicitation, the Contractor's Response, and additional negotiated terms, provided that additional negotiated terms will take precedence over the relevant terms in the RFR and the Contractor's Response only if made using the process outlined in 801 CMR 21.07 , incorporated herein, provided that any amended RFR or Response terms result in best value, lower costs, or a more cost effective Contract.			
AUTHORIZING SIGNATORY FOR THE CONTRACTOR: X: _____ Date: _____ (Signature and Date Must Be Handwritten At Time of Signature) Print Name: _____ Print Title: _____		AUTHORIZING SIGNATORY FOR THE COMMONWEALTH: X: _____ Date: _____ (Signature and Date Must Be Handwritten At Time of Signature) Print Name: _____ Print Title: _____	



INSTRUCTIONS AND CONTRACTOR CERTIFICATIONS

The following instructions and terms are incorporated by reference and apply to this Standard Contract Form. Text that appears underlined indicates a "hyperlink" to an Internet or bookmarked site and are unofficial versions of these documents and Departments and Contractors should consult with their legal counsel to ensure compliance with all legal requirements. Using the Web Toolbar will make navigation between the form and the hyperlinks easier. Please note that not all applicable laws have been cited.

CONTRACTOR LEGAL NAME (AND D/B/A): Enter the **Full Legal Name** of the Contractor's business as it appears on the Contractor's [W-9](#) or [W-4 Form](#) (Contract Employees only) and the applicable [Commonwealth Terms and Conditions](#). If Contractor also has a "doing business as" (d/b/a) name, BOTH the legal name and the "d/b/a" name must appear in this section.

Contractor Legal Address: Enter the Legal Address of the Contractor as it appears on the Contractor's [W-9](#) or [W-4 Form](#) (Contract Employees only) and the applicable [Commonwealth Terms and Conditions](#), which must match the legal address on the 1099I table in MMARS (or the Legal Address in HR/CMS for Contract Employee).

Contractor Payment Remittance Address: Enter the address other than the Legal Address for payments which must match the remittance address on the W-9 submitted by the Contractor. All Contractor payments are made via EFT in accordance with the Bill Payment Policy.

Contractor Contract Manager: Enter the authorized Contract Manager who will be responsible for managing the Contract. The Contract Manager should be an Authorized Signatory or, at a minimum, a person designated by the Contractor to represent the Contractor, receive legal notices and negotiate ongoing Contract issues. The Contract Manager is considered "Key Personnel" and may not be changed without the prior written approval of the Department. If the Contract is posted on Comm-PASS, the Contract Manager must be listed on the Vendor Section tab.

Contractor E-Mail Address/Phone/Fax: Enter the electronic mail (e-mail) address, phone and fax number of the Contractor Contract Manager. This information must be kept current by the Contractor to ensure that the Department can contact the Contractor and provide any required legal notices. Legal notice received by the Contract Manager (with confirmation of actual receipt) through the listed address, fax number(s) or electronic mail address will meet any written legal notice requirements.

Contractor Vendor Code: Enter the [MMARS Vendor Code](#) assigned by the Commonwealth. If a Vendor Code has not yet been assigned, leave this space blank and the Department will complete this section when a Vendor Code has been assigned along with the [Payment Remittance Address Code](#) (e.g., "AD001") for this Contract. The Department is responsible for verifying with authorized signatories of the Contractor, as part of the procurement and contracting process, that the legal name, address and Federal Tax Identification Number (TIN) in the Contract documents match the Vendor Code and that the payment address code is set up for EFT payments. **EFT is required for all payments absent exceptional circumstances.**

COMMONWEALTH DEPARTMENT NAME: Enter the full Department name with the authority to obligate funds encumbered for the Contract.

Commonwealth MMARS Alpha Department Code: Enter the [three \(3\) letter MMARS Code](#), assigned to this Commonwealth Department in the state accounting system.

Department Business Mailing Address: Enter the address where all formal correspondence to the Department must be sent. Unless otherwise specified in the Contract, legal notice sent or received by the Department's Contract Manager (with confirmation of actual receipt) through the listed address, fax number(s) or electronic mail address for the Contract Manager will meet any requirements for written notice under the Contract.

Department Billing Address: Enter the Billing Address or email address if invoices must be sent to a different location. Billing or confirmation of delivery of performance issues should be resolved through the listed Contract Managers.

Department Contract Manager: Identify the authorized Contract Manager who will be responsible for managing the Contract, who should be an authorized signatory or an employee designated by the Department to represent the Department to receive legal notices and negotiate ongoing Contract issues.

Department E-Mail Address/Phone/Fax: Enter the electronic mail (e-mail) address, phone and fax number of the Department Contract Manager. An alternate contact may also be entered under E-Mail Address 2 (optional). Unless otherwise specified in the Contract, legal notice sent or received by the Contract Manager (with confirmation of actual receipt) through the listed address, fax number(s) or electronic mail address will meet any requirements for written notice under the Contract.

MMARS Document ID(s): Enter the MMARS 20 character encumbrance transaction number associated with this Contract which must remain the same for the life of the Contract. If multiple numbers exist for this Contract, identify all Doc Ids.

RFR/Procurement or Other ID Number or Name: Enter the Request for Response (RFR) or other Procurement Reference number, Contract ID Number or other reference/tracking number for this Contract or Amendment and will be entered into the Board Award Field in the MMARS encumbrance transaction for this Contract.

NEW CONTRACTS (left side of Form):

Complete this section ONLY if this Contract is brand new. (Complete the CONTRACT AMENDMENT section for any material changes to an existing or an expired Contract, and for exercising options to renew or annual contracts under a multi-year procurement or grant program.)

PROCUREMENT OR EXCEPTION TYPE: Check the appropriate type of procurement or exception for this Contract. Only one option can be selected. See [State Finance Law and General Requirements](#), [Acquisition Policy and Fixed Assets](#), the [Commodities and Services Policy](#) and the [Procurement Information Center \(Department Contract Guidance\)](#) for details.

Statewide Contract (OSD or an OSD-designated Department): Check this option for a Statewide Contract under OSD, or by an OSD-designated Department.

Collective Purchase approved by OSD: Check this option for Contracts approved by OSD for collective purchases through federal, state, local government or other entities.

Department Contract Procurement: Check this option for a Department procurement including state grants and federal sub-grants under [815 CMR 2.00](#) and [State Grants and Federal Subgrants Policy](#), Departmental Master Agreements (MA). If multi-Department user Contract, identify multi-Department use is allowable in Brief Description.

Emergency Contract: Check this option when the Department has determined that an unforeseen crisis or incident has arisen which requires or mandates immediate purchases to avoid substantial harm to the functioning of government or the provision of necessary or mandated services or whenever the health, welfare or safety of clients or other persons or serious damage to property is threatened.

Contract Employee: Check this option when the Department requires the performance of an [Individual Contractor](#), and when the planned Contract performance with an Individual has been classified using the [Employment Status Form](#) (prior to the Contractor's selection) as work of a Contract Employee and not that of an Independent Contractor.

Legislative/Legal or Other Exemption: Check this option when legislation, an existing legal obligation, prohibition or other circumstance exempts or prohibits a Contract from being competitively procured, or identify any other procurement exception not already listed. Legislative "earmarks" exempt the Contract solely from procurement requirements, and all other Contract and state finance laws and policies apply. Supporting documentation must be attached to explain and justify the exemption.

CONTRACT AMENDMENT (Right Side of Form)

Complete this section for any Contract being renewed, amended or to continue a lapsed Contract. All Contracts with available options to renew must be amended referencing the original procurement and Contract doc ids, since all continuing contracts must be maintained in the same Contract file (even if the underlying appropriation changes each fiscal year.) "See [Amendments, Suspensions, and Termination Policy](#).)

Enter Current Contract End Date: Enter the termination date of the Current Contract being amended, even if this date has already passed. (Note: Current Start Date is not requested since this date does not change and is already recorded in MMARS.)

Enter Amendment Amount: Enter the amount of the Amendment increase or decrease to a Maximum Obligation Contract. Enter "no change" for Rate Contracts or if no change.

AMENDMENT TYPE: Identify the type of Amendment being done. Documentation supporting the updates to performance and budget must be attached. **Amendment to Scope or Budget:** Check this option when renewing a Contract or executing any Amendment ("material change" in Contract terms) even if the Contract has lapsed. The parties may negotiate a change in any element of Contract performance or cost identified in the RFR or the Contractor's response which results in lower costs, or a more cost-effective or better value performance than was presented in the original selected response, provided the negotiation results in a better value within the scope of the RFR than what was proposed by the Contractor in the original selected response. Any "material" change in the Contract terms must be memorialized in a formal Amendment even if a corresponding MMARS transaction is not needed to support the change. Additional negotiated terms will take precedence over the relevant terms in the RFR and the Contractor's Response only if made using the process outlined in [801 CMR 21.07](#), incorporated herein, provided that any amended RFR or Response terms result in best value, lower costs, or a more cost effective Contract.

Interim Contracts: Check this option for an Interim Contract to prevent a lapse of Contract performance whenever an existing Contract is being re-procured but the new procurement has not been completed, to bridge the gap during implementation between an expiring and a new procurement, or to contract with an interim Contractor when a current Contractor is unable to complete full performance under a Contract.

Contract Employee: Check this option when the Department requires a renewal or other amendment to the performance of a Contract Employee.

Legislative/Legal or Other Exemption: Check this option when legislation, an existing legal obligation, prohibition or other circumstance exempts or prohibits a Contract from being competitively procured, or identify any other procurement exception not already listed. Legislative "earmarks" exempt the Contract solely from procurement requirements, and all other Contract and state finance laws and policies apply. Attach supporting documentation to explain and justify the exemption and whether Contractor selection has been publicly posted.

COMMONWEALTH OF MASSACHUSETTS ~ STANDARD CONTRACT FORM



COMMONWEALTH TERMS AND CONDITIONS

Identify which [Commonwealth Terms and Conditions](#) the Contractor has executed and is incorporated by reference into this Contract. This Form is signed only once and recorded on the Vendor Customer File (VCUST). See [Vendor File and W-9s](#) Policy.

COMPENSATION

Identify if the Contract is a **Rate Contract** (with no stated Maximum Obligation) or a **Maximum Obligation Contract** (with a stated Maximum Obligation) and identify the Maximum Obligation. If the Contract is being amended, enter the new Maximum Obligation based upon the increase or decreasing Amendment. The Total Maximum Obligation must reflect the total funding for the dates of service under the contract, including the Amendment amount if the Contract is being amended. The Maximum Obligation must match the MMARS encumbrance. Funding and allotments must be verified as [available and encumbered](#) prior to incurring obligations.

PAYMENTS AND PROMPT PAY DISCOUNTS

Payments are processed within a 45 day payment cycle through EFT in accordance with the Commonwealth [Bill Payment Policy](#) for investment and cash flow purposes. Departments may NOT negotiate accelerated payments and Payees are NOT entitled to accelerated payments UNLESS a prompt payment discount (PPD) is provided to support the Commonwealth's loss of investment earnings for this earlier payment, or unless a payments is legally mandated to be made in less than 45 days (e.g., construction contracts, Ready Payments under [G.L. c. 29, s. 23A](#)). See [Prompt Pay Discounts Policy](#). PPD are identified as a percentage discount which will automatically deducted when an accelerated payment is made. Reduced contracts rates may not be negotiated to replace a PPD. If PPD fields are left blank please identify the exemption: (1) statutory/legal/Ready Payments (2) federal grant/trust or (3) initial state grant or entitlement payments for start up costs. Financial hardship is not a sufficient justification to accelerate cash flow for *all* payments under a Contract. Initial grant or contract payments may be accelerated for the *first* invoice or initial grant installment, but subsequent periodic installments or invoice payments should be scheduled to support the Payee cash flow needs and the standard 45 day EFT payment cycle in accordance with the Bill Payment Policy. Any accelerated payment that does not provide for a PPD must have a legal justification in Contract file for audit purposes explaining why accelerated payments were allowable without a PPD.

BRIEF DESCRIPTION OF CONTRACT PERFORMANCE

Enter a brief description of the Contract performance, project name and/or other identifying information for the Contract to specifically identify the Contract performance, match the Contract with attachments, and determine if the appropriate expenditure code (as listed in the [Expenditure Classification Handbook](#)) has been selected. Enter "Multi-User Departmental procurement" if other Departments can access procurement. For Amendments, identify the purpose and what items are being amended. Merely stating "see attached" or referencing attachments without a narrative description of performance is insufficient. The Department may include any additional information in this section to identify unique or important information related to this Contract, program or the Contractor. If multi-Department user Contract, identify multi-Department use is allowable

ANTICIPATED START DATE

The Department and Contractor must certify WHEN obligations under this Contract or Contract Amendment may be incurred, either as of the Effective Date (latest signature date and of any required approvals) a LATER date, or if the performance has already been incurred PRIOR to the Effective Date by selecting the appropriate option. In the event obligations have been incurred by the Contractor prior to the Effective Date, the Contract must include detailed supporting documentation of performance made prior to the Effective date (including during a lapse between a Contract expiration and Contract Amendment) or the terms and process for eligible reimbursements after performance has been made by the Contractor (e.g., grant program). Proof of eligible reimbursement program must be attached. For Settlements, the parties agree to resolve payment for performance made outside the scope of the Contract (prior to Effective date or after termination date) which releases the Commonwealth from further obligations for the identified performance. This Amendment option is used in lieu of the [Settlement and Release Form](#). Settlement payments are included under the same encumbrance and object codes as the Contract. Performance dates are subject to [G.L. c.4, § 9](#).

CONTRACT END DATE

The Department must enter the date that Contract performance will terminate. **If the Contract is being amended and the Contract End Date is not changing, this date must be re-entered again here.** A Contract must be signed for at least the initial duration but not longer than the period of procurement listed in the RFR, or other solicitation document (if applicable). No new performance is allowable beyond the end date without an amendment, but the Department may allow a Contractor to complete minimal close out performance obligations if substantial performance has been made prior to the termination date of the Contract and prior to the end of the fiscal year in which payments are appropriated, provided that any close out performance is subject to appropriation and funding limits under state finance law, and CTR may adjust encumbrances and payments in the state accounting system to enable final close out payments. Performance dates are subject to [G.L. c.4, § 9](#).

CERTIFICATIONS AND EXECUTION

See [Department Head Signature Authorization Policy](#) and the [Contractor Authorized Signatory Listing](#) for policies on Contractor and Department signatures.

Authorizing Signature for Contractor/Date: The Authorized Contractor Signatory must (in their own handwriting and in ink) sign AND enter the date the Contract is signed. See section above under "[Anticipated Contract Start Date](#)". Acceptance of payment by the Contractor shall waive any right of the Contractor to claim the Contract/Amendment is not valid and the Contractor may not void the Contract. **Rubber stamps, typed or other images are not acceptable.** Proof of Contractor signature authorization on a [Contractor Authorized Signatory Listing](#) may be required by the Department if not already on file.

Contractor Name /Title: The Contractor Authorized Signatory's name and title must appear legibly as it appears on the [Contractor Authorized Signatory Listing](#).

Authorizing Signature For Commonwealth/Date: The [Authorized Department Signatory](#) must (in their own handwriting and in ink) sign AND enter the date the Contract is signed. See section above under "[Anticipated Start Date](#)". **Rubber stamps, typed or other images are not accepted.** The Authorized Signatory must be an employee within the Department legally responsible for the Contract. See [Department Head Signature Authorization](#). The Department must have the legislative funding appropriated for all the costs of this Contract or funding allocated under an [approved Interdepartmental Service Agreement \(ISA\)](#). A Department may not contract for performance to be delivered to or by another state department without specific legislative authorization (unless this Contract is a Statewide Contract). For Contracts requiring Secretariat signoff, evidence of Secretariat signoff must be included in the Contract file.

Department Name /Title: Enter the Authorized Signatory's name and title legibly.

CONTRACTOR CERTIFICATIONS AND LEGAL REFERENCES

Notwithstanding verbal or other representations by the parties, the "Effective Date" of this Contract or Amendment shall be the latest date that this Contract or Amendment has been executed by an authorized signatory of the Contractor, the Department, or a later Contract or Amendment Start Date specified, subject to any required approvals. The Contractor makes all certifications required under this Contract under the pains and penalties of perjury, and agrees to provide any required documentation upon request to support compliance, and agrees that all terms governing performance of this Contract and doing business in Massachusetts are attached or incorporated by reference herein:

Commonwealth and Contractor Ownership Rights. The Contractor certifies and agrees that the Commonwealth is entitled to ownership and possession of all "deliverables" which purchased or developed with Contract funds. A Department may not relinquish Commonwealth rights to deliverables nor may Contractors sell products developed with Commonwealth resources without just compensation. The Contract should detail all Commonwealth deliverables and ownership rights and any Contractor proprietary rights.

Qualifications. The Contractor certifies it is qualified and shall at all times remain qualified to perform this Contract; that performance shall be timely and meet or exceed industry standards for the performance required, including obtaining requisite licenses, registrations, permits, resources for performance, and sufficient professional, liability; and other appropriate insurance to cover the performance. If the Contractor is a business, the Contractor certifies that it is listed under the [Secretary of State's website](#) as licensed to do business in Massachusetts, as required by law.

Contractor Code of Conduct and Business Ethics. The Contractor certifies that performance under this Contract, in addition to meeting the terms of the Contract, will be made using ethical business standards and good stewardship of taxpayer and other public funding and resources to prevent fraud, waste and abuse. The Contractor certifies that a Code of Conduct and Business Ethics will be available for review upon request within 60 days of the Effective Date of this Contract which will be provided to all employees and subcontractors involved in contract performance.

Collusion. The Contractor certifies that this Contract has been offered in good faith and without collusion, fraud or unfair trade practices with any other person, that any actions to avoid or frustrate fair and open competition are prohibited by law, and shall be grounds for rejection or disqualification of a Response or termination of this Contract.

Public Records and Access The Contractor shall provide full access to records related to performance and compliance to the Department and officials listed under [Executive Order 195](#) and [G.L. c. 11, s.12](#) seven (7) years beginning on the first day after the final payment under this Contract or such longer period necessary for the resolution of any litigation, claim, negotiation, audit or other inquiry involving this Contract. Access to view Contractor records related to any breach or allegation of fraud, waste and/or abuse may not be denied and Contractor can not claim confidentiality or trade secret protections solely for viewing but not retaining documents. Routine Contract performance compliance reports or documents related to any alleged breach or allegation of non-compliance, fraud, waste, abuse or collusion may be provided electronically and shall be provided at Contractor's own expense. Reasonable costs for copies of non-routine Contract related records shall not exceed the rates for public records under [950 C.M.R. 32.00](#).

Debarment. The Contractor certifies that neither it nor any of its subcontractors are currently debarred or suspended by the federal or state government under any law or regulation including, [Executive Order 147](#); [G.L. c. 29, s. 29F](#); [G.L. c.30, § 39R](#); [G.L. c.149, § 27C](#); [G.L. c.149, § 44C](#); [G.L. c.149, § 148B](#) and [G.L. c. 152, s. 25C](#).

COMMONWEALTH OF MASSACHUSETTS ~ STANDARD CONTRACT FORM



Applicable Laws. The Contractor shall comply with all applicable state laws and regulations including but not limited to the applicable [Massachusetts General Laws](#); the Official [Code of Massachusetts Regulations](#); [Code of Massachusetts Regulations](#) (unofficial); [801 CMR 21.00](#) (Procurement of Commodity and Service Procurements, Including Human and Social Services); [815 CMR 2.00](#) (Grants and Subsidies); [808 CMR 1.00](#) (Compliance, Reporting and Auditing for Human And Social Services); [AICPA Standards](#); confidentiality of Department records under [G.L. c. 66A](#); and the [Massachusetts Constitution Article XVIII](#) if applicable.

Invoices. The Contractor must submit invoices in accordance with the terms of the Contract and the Commonwealth [Bill Paying Policy](#). Contractors must be able to reconcile and properly attribute concurrent payments from multiple Departments. Final invoices in any fiscal year must be submitted no later than August 15th for performance made and received (goods delivered, services completed) prior to June 30th, in order to make payment for that performance prior to the close of the fiscal year to prevent reversion of appropriated funds. Failure to submit timely invoices by August 15th or other date listed in the Contract shall authorize the Department to issue an estimated payment based upon the Department's determination of performance delivered and accepted. The Contractor's acceptance of this estimated payment releases the Commonwealth from further claims for these invoices. If budgetary funds revert due to the Contractor's failure to submit timely final invoices, or for disputing an estimated payment, the Department may deduct a penalty up to 10% from any final payment in the next fiscal year for failure to submit timely invoices.

Payments Subject To Appropriation. Pursuant to [G.L. c. 29](#) § 26, § 27 and § 29, Departments are required to expend funds only for the purposes set forth by the Legislature and within the funding limits established through appropriation, allotment and subsidiary, including mandated allotment reductions triggered by [G.L. c. 29, § 9C](#). A Department cannot authorize or accept performance in excess of an existing appropriation and allotment, or sufficient non-appropriated available funds. Any oral or written representations, commitments, or assurances made by the Department or any other Commonwealth representative are not binding. The Commonwealth has no legal obligation to compensate a Contractor for performance that is not requested and is intentionally delivered by a Contractor outside the scope of a Contract. Contractors should verify funding prior to beginning performance.

Intercept. Contractors may be registered as Customers in the Vendor file if the Contractor owes a Commonwealth debt. Unresolved and undisputed debts, and overpayments of Contract payments that are not reimbursed timely shall be subject to intercept pursuant to [G.L. c. 7A, s. 3](#) and [815 CMR 9.00](#). Contract overpayments will be subject to immediate intercept or payment offset. The Contractor may not penalize any state Department or assess late fees, cancel a Contract or other services if amounts are intercepted or offset due to recoupment of an overpayment, outstanding taxes, child support, other overdue debts or Contract overpayments.

Tax Law Compliance. The Contractor certifies under the pains and penalties of perjury tax compliance with [Federal tax laws](#); [State tax laws](#) including but not limited to [G.L. c. 62C](#), [G.L. c. 62C, s. 49A](#); compliance with all state tax laws, reporting of employees and contractors, withholding and remitting of tax withholdings and child support and is in good standing with respect to all state taxes and returns due; reporting of employees and contractors under [G.L. c. 62E](#), withholding and remitting [child support](#) including [G.L. c. 119A, s. 12](#); [TIR 05-11: New Independent Contractor Provisions](#) and applicable [TIRs](#).

Bankruptcy, Judgments, Potential Structural Changes, Pending Legal Matters and Conflicts. The Contractor certifies it has not been in bankruptcy and/or receivership within the last three calendar years, and the Contractor certifies that it will immediately notify the Department in writing **at least 45 days prior** to filing for bankruptcy and/or receivership, any potential structural change in its organization, or if there is **any risk** to the solvency of the Contractor that may impact the Contractor's ability to timely fulfill the terms of this Contract or Amendment. The Contractor certifies that at any time during the period of the Contract the Contractor is required to affirmatively disclose in writing to the Department Contract Manager the details of any judgment, criminal conviction, investigation or litigation pending against the Contractor or any of its officers, directors, employees, agents, or subcontractors, including any potential conflicts of interest of which the Contractor has knowledge, or learns of during the Contract term. Law firms or Attorneys providing legal services are required to identify any potential conflict with representation of any Department client in accordance with Massachusetts Board of Bar Overseers (BBO) rules.

Federal Anti-Lobbying and Other Federal Requirements. If receiving federal funds, the Contractor certifies compliance with federal anti-lobbying requirements including [31 USC 1352](#); other federal requirements; [Executive Order 11246](#); [Air Pollution Act](#); [Federal Water Pollution Control Act](#) and [Federal Employment Laws](#).

Protection of Personal Data and Information. The Contractor certifies that all steps will be taken to ensure the security and confidentiality of all Commonwealth data for which the Contractor becomes a holder, either as part of performance or inadvertently during performance, with special attention to restricting access, use and disbursement of personal data and information under [G.L. c. 93H](#) and [c. 66A](#) and [Executive Order 504](#). The Contractor is required to comply with [G.L. c. 93I](#) for the proper disposal of all paper and electronic media, backups or systems containing personal data and information, provided further that the Contractor is required to ensure that any personal data or information transmitted electronically or through a portable device be properly encrypted using (at a minimum) [Information Technology Division \(ITD\) Protection of Sensitive Information](#),

provided further that any Contractor having access to credit card or banking information of Commonwealth customers certifies that the Contractor is PCI compliant in accordance with the [Payment Card Industry Council Standards](#) and shall provide confirmation compliance during the Contract, provide further that the Contractor shall immediately notify the Department in the event of any security breach including the unauthorized access, disbursement, use or disposal of personal data or information, and in the event of a security breach, the Contractor shall cooperate fully with the Commonwealth and provide access to any information necessary for the Commonwealth to respond to the security breach and shall be fully responsible for any damages associated with the Contractor's breach including but not limited to [G.L. c. 214, s. 3B](#).

Corporate and Business Filings and Reports. The Contractor certifies compliance with any certification, filing, reporting and service of process requirements of the [Secretary of the Commonwealth](#), the [Office of the Attorney General](#) or other Departments as related to its conduct of business in the Commonwealth; and with its incorporating state (or foreign entity).

Employer Requirements. Contractors that are employers certify compliance with applicable state and federal employment laws or regulations, including but not limited to [G.L. c. 5, s. 1](#) (Prevailing Wages for Printing and Distribution of Public Documents); [G.L. c. 7, s. 22](#) ([Prevailing Wages for Contracts for Meat Products and Clothing and Apparel](#)); [minimum wages and prevailing wage programs and payments](#); [unemployment insurance](#) and contributions; [workers' compensation and insurance](#), [child labor laws](#), [AGO fair labor practices](#); [G.L. c. 149](#) (Labor and Industries); [G.L. c. 150A](#) (Labor Relations); [G.L. c. 151](#) and [455 CMR 2.00](#) (Minimum Fair Wages); [G.L. c. 151A](#) (Employment and Training); [G.L. c. 151B](#) (Unlawful Discrimination); [G.L. c. 151E](#) (Business Discrimination); [G.L. c. 152](#) (Workers' Compensation); [G.L. c. 153](#) (Liability for Injuries); [29 USC c. 8](#) (Federal Fair Labor Standards); [29 USC c. 28](#) and the [Federal Family and Medical Leave Act](#).

Federal And State Laws And Regulations Prohibiting Discrimination including but not limited to the [Federal Equal Employment Opportunity \(EEO\) Laws](#) the [Americans with Disabilities Act](#); [42 U.S.C Sec. 12,101, et seq.](#), the [Rehabilitation Act](#), [29 USC c. 16 s. 794](#); [29 USC c. 16, s. 701](#); [29 USC c. 14, 623](#); the [42 USC c. 45](#); (Federal Fair Housing Act); [G.L. c. 151B](#) (Unlawful Discrimination); [G.L. c. 151E](#) (Business Discrimination); the Public Accommodations Law [G.L. c. 272, s. 92A](#); [G.L. c. 272, s. 98](#) and 98A, [Massachusetts Constitution Article CXIV](#) and [G.L. c. 93, s. 103](#); [47 USC c. 5, sc. II, Part II, s. 255](#) (Telecommunication Act; Chapter 149, [Section 105D](#), [G.L. c. 151C](#), [G.L. c. 272](#), [Section 92A](#), [Section 98](#) and [Section 98A](#), and [G.L. c. 111](#), [Section 199A](#), and [Massachusetts Disability-Based Non-Discrimination Standards For Executive Branch Entities](#), and related Standards and Guidance, authorized under Massachusetts Executive Order or any disability-based protection arising from state or federal law or precedent. See also [MCAD](#) and [MCAD links and Resources](#).

Small Business Purchasing Program (SBPP). A Contractor may be eligible to participate in the SBPP, created pursuant to [Executive Order 523](#), if qualified through the SBPP SmartBid subscription process at: [www.comm-pass.com](#) and with acceptance of the terms of the SBPP participation agreement.

Limitation of Liability for Information Technology Contracts (and other Contracts as Authorized). The [Information Technology Mandatory Specifications](#) and the [IT Acquisition Accessibility Contract Language](#) are incorporated by reference into Information Technology Contracts. The following language will apply to Information Technology contracts in the U01, U02, U03, U04, U05, U06, U07, U08, U09, U10, U75, U98 object codes in the [Expenditure Classification Handbook](#) or other Contracts as approved by CTR or OSD. Pursuant to Section 11. Indemnification of the Commonwealth Terms and Conditions, the term "other damages" shall include, but shall not be limited to, the reasonable costs the Commonwealth incurs to repair, return, replace or seek cover (purchase of comparable substitute commodities and services) under a Contract. "Other damages" shall not include damages to the Commonwealth as a result of third party claims, provided, however, that the foregoing in no way limits the Commonwealth's right of recovery for personal injury or property damages or patent and copyright infringement under Section 11 nor the Commonwealth's ability to join the contractor as a third party defendant. Further, the term "other damages" shall not include, and in no event shall the contractor be liable for, damages for the Commonwealth's use of contractor provided products or services, loss of Commonwealth records, or data (or other intangible property), loss of use of equipment, lost revenue, lost savings or lost profits of the Commonwealth. In no event shall "other damages" exceed the greater of \$100,000, or two times the value of the product or service (as defined in the Contract scope of work) that is the subject of the claim. Section 11 sets forth the contractor's entire liability under a Contract. Nothing in this section shall limit the Commonwealth's ability to negotiate higher limitations of liability in a particular Contract, provided that any such limitation must specifically reference Section 11 of the Commonwealth Terms and Conditions. In the event the limitation of liability conflicts with accounting standards which mandate that there can be no cap of damages, the limitation shall be considered waived for that audit engagement. These terms may be applied to other Contracts only with prior written confirmation from the Operational Services Division or the Office of the Comptroller. The terms in this Clarification may not be modified.

Northern Ireland Certification. Pursuant to [G.L. c. 7 s. 22C](#) for state agencies, state authorities, the House of Representatives or the state Senate, by signing this Contract the Contractor certifies that it does not employ ten or more employees in an office or other facility in Northern Ireland and if the Contractor employs ten or more employees in an office

COMMONWEALTH OF MASSACHUSETTS ~ STANDARD CONTRACT FORM



or other facility located in Northern Ireland the Contractor certifies that it does not discriminate in employment, compensation, or the terms, conditions and privileges of employment on account of religious or political belief; and it promotes religious tolerance within the work place, and the eradication of any manifestations of religious and other illegal discrimination; and the Contractor is not engaged in the manufacture, distribution or sale of firearms, munitions, including rubber or plastic bullets, tear gas, armored vehicles or military aircraft for use or deployment in any activity in Northern Ireland.

Pandemic, Disaster or Emergency Performance. In the event of a serious emergency, pandemic or disaster outside the control of the Department, the Department may negotiate emergency performance from the Contractor to address the immediate needs of the Commonwealth even if not contemplated under the original Contract or procurement. Payments are subject to appropriation and other payment terms.

Consultant Contractor Certifications (For Consultant Contracts "HH" and "NN" and "U05" object codes subject to [G.L. Chapter 29, s. 29A](#)). Contractors must make required disclosures as part of the RFR Response or using the [Consultant Contractor Mandatory Submission Form](#).

Attorneys. Attorneys or firms providing legal services or representing Commonwealth Departments may be subject to [G.L. c. 30, s. 65](#), and if providing litigation services must be approved by the Office of the Attorney General to appear on behalf of a Department, and shall have a continuing obligation to notify the Commonwealth of any conflicts of interest arising under the Contract.

Subcontractor Performance. The Contractor certifies full responsibility for Contract performance, including subcontractors, and that comparable Contract terms will be included in subcontracts, and that the Department will not be required to directly or indirectly manage subcontractors or have any payment obligations to subcontractors.

EXECUTIVE ORDERS

For covered Executive state Departments, the Contractor certifies compliance with applicable [Executive Orders](#) (see also [Massachusetts Executive Orders](#)), including but not limited to the specific orders listed below. A breach during period of a Contract may be considered a material breach and subject Contractor to appropriate monetary or Contract sanctions.

Executive Order 481. Prohibiting the Use of Undocumented Workers on State Contracts. For all state agencies in the Executive Branch, including all executive offices, boards, commissions, agencies, Departments, divisions, councils, bureaus, and offices, now existing and hereafter established, by signing this Contract the Contractor certifies under the pains and penalties of perjury that they shall not knowingly use undocumented workers in connection with the performance of this Contract; that, pursuant to federal requirements, shall verify the immigration status of workers assigned to a Contract without engaging in unlawful discrimination; and shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker

Executive Order 130. Anti-Boycott. The Contractor warrants, represents and agrees that during the time this Contract is in effect, neither it nor any affiliated company, as hereafter defined, participates in or cooperates with an international boycott (See [IRC § 999\(b\)\(3\)-\(4\)](#), and [IRS Audit Guidelines Boycotts](#)) or engages in conduct declared to be unlawful by [G.L. c. 151E, s. 2](#). A breach in the warranty, representation, and agreement contained in this paragraph, without limiting such other rights as it may have, the Commonwealth shall be entitled to rescind this Contract. As used herein, an affiliated company shall be any business entity of which at least 51% of the ownership interests are directly or indirectly owned by the Contractor or by a person or persons or business entity or entities directly or indirectly owning at least 51% of the ownership interests of the Contractor, or which directly or indirectly owns at least 51% of the ownership interests of the Contractor.

Executive Order 346. Hiring of State Employees By State Contractors Contractor certifies compliance with both the conflict of interest law [G.L. c. 268A specifically s. 5 \(f\)](#) and this order; and includes limitations regarding the hiring of state employees by private companies contracting with the Commonwealth. A privatization contract shall be deemed to include a specific prohibition against the hiring at any time during the term of Contract, and for any position in the Contractor's company, any state management employee who is, was, or will be involved in the preparation of the RFP, the negotiations leading to the awarding of the Contract, the decision to award the Contract, and/or the supervision or oversight of performance under the Contract.

Executive Order 444. Disclosure of Family Relationships With Other State Employees. Each person applying for employment (including Contract work) within the Executive Branch under the Governor must disclose in writing the names of all immediate family related to immediate family by marriage who serve as employees or elected officials of the Commonwealth. All disclosures made by applicants hired by the Executive Branch under the Governor shall be made available for public inspection to the extent permissible by law by the official with whom such disclosure has been filed.

Executive Order 504. Regarding the Security and Confidentiality of Personal Information. For all Contracts involving the Contractor's access to personal information, as defined in [G.L. c. 93H](#), and personal data, as defined in [G.L. c. 66A](#), owned or controlled by Executive Department agencies, or access to agency systems containing such information or data (herein collectively "personal information"), Contractor certifies under the pains and penalties of perjury that the Contractor (1) has read Commonwealth of Massachusetts Executive Order 504 and agrees to protect any and all personal information; and (2) has reviewed all of the Commonwealth [Information Technology Division's Security Policies](#).

Notwithstanding any contractual provision to the contrary, in connection with the Contractor's performance under this Contract, for all state agencies in the Executive Department, including all executive offices, boards, commissions, agencies, departments, divisions, councils, bureaus, and offices, now existing and hereafter established, the Contractor shall: (1) obtain a copy, review, and comply with the contracting agency's Information Security Program (ISP) and any pertinent security guidelines, standards, and policies; (2) comply with all of the Commonwealth of Massachusetts Information Technology Division's "[Security Policies](#)") (3) communicate and enforce the contracting agency's ISP and such Security Policies against all employees (whether such employees are direct or contracted) and subcontractors; (4) implement and maintain any other reasonable appropriate security procedures and practices necessary to protect personal information to which the Contractor is given access by the contracting agency from the unauthorized access, destruction, use, modification, disclosure or loss; (5) be responsible for the full or partial breach of any of these terms by its employees (whether such employees are direct or contracted) or subcontractors during or after the term of this Contract, and any breach of these terms may be regarded as a material breach of this Contract; (6) in the event of any unauthorized access, destruction, use, modification, disclosure or loss of the personal information (collectively referred to as the "unauthorized use"): (a) immediately notify the contracting agency if the Contractor becomes aware of the unauthorized use; (b) provide full cooperation and access to information necessary for the contracting agency to determine the scope of the unauthorized use; and (c) provide full cooperation and access to information necessary for the contracting agency and the Contractor to fulfill any notification requirements. Breach of these terms may be regarded as a material breach of this Contract, such that the Commonwealth may exercise any and all contractual rights and remedies, including without limitation indemnification under Section 11 of the [Commonwealth's Terms and Conditions](#), withholding of payments, Contract suspension, or termination. In addition, the Contractor may be subject to applicable statutory or regulatory penalties, including and without limitation, those imposed pursuant to G.L. c. 93H and under [G.L. c. 214, § 3B](#) for violations under M.G.L. c. 66A. [Executive Orders 523, 524 and 526](#), Executive Order 526 (Order Regarding Non-Discrimination, Diversity, Equal Opportunity and Affirmative Action which supersedes [Executive Order 478](#)), [Executive Order 524](#) (Establishing the Massachusetts Supplier Diversity Program which supersedes Executive Order 390), [Executive Order 523](#) (Establishing the Massachusetts Small Business Purchasing Program.) All programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status (including Vietnam-era veterans), or background. The Contractor and any subcontractors may not engage in discriminatory employment practices; and the Contractor certifies compliance with applicable federal and state laws, rules, and regulations governing fair labor and employment practices; and the Contractor commits to purchase supplies and services from certified minority or women-owned businesses, small businesses, or businesses owned by socially or economically disadvantaged persons or persons with disabilities. These provisions shall be enforced through the contracting agency, OSD, and/or the Massachusetts Commission Against Discrimination. Any breach shall be regarded as a material breach of the contract that may subject the contractor to appropriate sanctions.



COMMONWEALTH TERMS AND CONDITIONS

This Commonwealth Terms and Conditions form is jointly issued by the Executive Office for Administration and Finance (ANF), the Office of the Comptroller (CTR) and the Operational Services Division (OSD) for use by all Commonwealth of Massachusetts ("State") Departments and Contractors. **Any changes or electronic alterations by either the Department or the Contractor to the official version of this form, as jointly published by ANF, CTR and OSD, shall be void.** Upon execution of these Commonwealth Terms and Conditions by the Contractor and filing as prescribed by the Office of the Comptroller, these Commonwealth Terms and Conditions will be incorporated by reference into any Contract for Commodities and Services executed by the Contractor and any State Department, in the absence of a superseding law or regulation requiring a different Contract form. Performance shall include services rendered, obligations due, costs incurred, commodities and deliverables provided and accepted by the Department, programs provided or other commitments authorized under a Contract. A deliverable shall include any tangible product to be delivered as an element of performance under a Contract. The Commonwealth is entitled to ownership and possession of all deliverables purchased or developed with State funds. Contract shall mean the Standard Contract Form issued jointly by ANF, CTR and OSD.

1. Contract Effective Start Date. Notwithstanding verbal or other representations by the parties, or an earlier start date indicated in a Contract, the effective start date of performance under a Contract shall be the date a Contract has been executed by an authorized signatory of the Contractor, the Department, a later date specified in the Contract or the date of any approvals required by law or regulation, whichever is later.

2. Payments And Compensation. The Contractor shall only be compensated for performance delivered and accepted by the Department in accordance with the specific terms and conditions of a Contract. All Contract payments are subject to appropriation pursuant to M.G.L. C. 29, §26, or the availability of sufficient non-appropriated funds for the purposes of a Contract, and shall be subject to intercept pursuant to M.G.L. C. 7A, §3 and 815 CMR 9.00. Overpayments shall be reimbursed by the Contractor or may be offset by the Department from future payments in accordance with state finance law. Acceptance by the Contractor of any payment or partial payment, without any written objection by the Contractor, shall in each instance operate as a release and discharge of the State from all claims, liabilities or other obligations relating to the performance of a Contract.

3. Contractor Payment Mechanism. All Contractors will be paid using the Payment Voucher System unless a different payment mechanism is required. The Contractor shall timely submit invoices (Payment Vouchers - Form PV) and supporting documentation as prescribed in a Contract. The Department shall review and return rejected invoices within fifteen (15) days of receipt with a written explanation for rejection. Payments shall be made in accordance with the bill paying policy issued by the Office of the Comptroller and 815 CMR 4.00, provided that payment periods listed in a Contract of less than forty-five (45) days from the date of receipt of an invoice shall be effective only to enable a Department to take advantage of early payment incentives and shall not subject any payment made within the forty-five (45) day period to a penalty. The Contractor Payroll System, shall be used only for "Individual Contractors" who have been determined to be "Contract Employees" as a result of the Department's completion of an Internal Revenue Service SS-8 form in accordance with the Omnibus Budget Reconciliation Act (OBRA) 1990, and shall automatically process all state and federal mandated payroll, tax and retirement deductions.

4. Contract Termination Or Suspension. A Contract shall terminate on the date specified in a Contract, unless this date is properly amended in accordance with all applicable laws and regulations prior to this date, or unless terminated or suspended under this Section upon prior written notice to the Contractor. The Department may terminate a Contract without cause and without penalty, or may terminate or suspend a Contract if the Contractor breaches any material term or condition or fails to perform or fulfill any material obligation required by a Contract, or in the event of an elimination of an appropriation or availability of sufficient funds for the purposes of a Contract, or in the event of an unforeseen public emergency mandating immediate Department action. Upon immediate notification to the other party, neither the Department nor the Contractor shall be deemed to be in breach for failure or delay in performance due to Acts of God or other causes factually beyond their control and without their fault or negligence. Subcontractor failure to perform or price increases due to market fluctuations or product availability will not be deemed factually beyond the Contractor's control.

5. Written Notice. Any notice shall be deemed delivered and received when submitted in writing in person or when delivered by any other appropriate

method evidencing actual receipt by the Department or the Contractor. Any written notice of termination or suspension delivered to the Contractor shall state the effective date and period of the notice, the reasons for the termination or suspension, if applicable, any alleged breach or failure to perform, a reasonable period to cure any alleged breach or failure to perform, if applicable, and any instructions or restrictions concerning allowable activities, costs or expenditures by the Contractor during the notice period.

6. Confidentiality. The Contractor shall comply with M.G.L. C. 66A if the Contractor becomes a "holder" of "personal data". The Contractor shall also protect the physical security and restrict any access to personal or other Department data in the Contractor's possession, or used by the Contractor in the performance of a Contract, which shall include, but is not limited to the Department's public records, documents, files, software, equipment or systems.

7. Record-keeping And Retention, Inspection Of Records. The Contractor shall maintain records, books, files and other data as specified in a Contract and in such detail as shall properly substantiate claims for payment under a Contract, for a minimum retention period of seven (7) years beginning on the first day after the final payment under a Contract, or such longer period as is necessary for the resolution of any litigation, claim, negotiation, audit or other inquiry involving a Contract. The Department shall have access, as well as any parties identified under Executive Order 195, during the Contractor's regular business hours and upon reasonable prior notice, to such records, including on-site reviews and reproduction of such records at a reasonable expense.

8. Assignment. The Contractor may not assign or delegate, in whole or in part, or otherwise transfer any liability, responsibility, obligation, duty or interest under a Contract, with the exception that the Contractor shall be authorized to assign present and prospective claims for money due to the Contractor pursuant to a Contract in accordance with M.G.L. C. 106, §9-318. The Contractor must provide sufficient notice of assignment and supporting documentation to enable the Department to verify and implement the assignment. Payments to third party assignees will be processed as if such payments were being made directly to the Contractor and these payments will be subject to intercept, offset, counter claims or any other Department rights which are available to the Department or the State against the Contractor.

9. Subcontracting By Contractor. Any subcontract entered into by the Contractor for the purposes of fulfilling the obligations under a Contract must be in writing, authorized in advance by the Department and shall be consistent with and subject to the provisions of these Commonwealth Terms and Conditions and a Contract. Subcontracts will not relieve or discharge the Contractor from any duty, obligation, responsibility or liability arising under a Contract. The Department is entitled to copies of all subcontracts and shall not be bound by any provisions contained in a subcontract to which it is not a party.

10. Affirmative Action, Non-Discrimination In Hiring And Employment. The Contractor shall comply with all federal and state laws, rules and regulations promoting fair employment practices or prohibiting employment discrimination and unfair labor practices and shall not discriminate in the hiring of any applicant for employment nor shall any qualified employee be demoted, discharged or otherwise subject to discrimination in the tenure, position, promotional opportunities, wages, benefits or terms and conditions of their employment because of race, color, national origin, ancestry, age, sex, religion, disability, handicap, sexual orientation or for exercising any rights afforded by law. The Contractor commits to purchasing supplies and services from certified minority or women-owned businesses, small businesses or businesses owned by socially or economically disadvantaged persons or persons with disabilities.

11. Indemnification. Unless otherwise exempted by law, the Contractor shall indemnify and hold harmless the State, including the Department, its agents, officers and employees against any and all claims, liabilities and costs for any personal injury or property damages, patent or copyright infringement or other damages that the State may sustain which arise out of or in connection with the Contractor's performance of a Contract, including but not limited to the negligence, reckless or intentional conduct of the Contractor, its agents, officers, employees or subcontractors. The Contractor shall at no time be considered an agent or representative of the Department or the State. After prompt notification of a claim by the State, the Contractor shall have an opportunity to participate in the defense of such claim and any negotiated settlement agreement or judgment. The State shall not be liable for any costs incurred by the Contractor arising under this paragraph. Any indemnification of the Contractor shall be subject to appropriation and applicable law.

12. Waivers. Forbearance or indulgence in any form or manner by a party shall not be construed as a waiver, nor in any way 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.



COMMONWEALTH TERMS AND CONDITIONS

13. **Risk Of Loss.** The Contractor shall bear the risk of loss for any Contractor materials used for a Contract and for all deliverables, Department personal or other data which is in the possession of the Contractor or used by the Contractor in the performance of a Contract until possession, ownership and full legal title to the deliverables are transferred to and accepted by the Department.

14. **Forum, Choice of Law And Mediation.** Any actions arising out of a Contract shall be governed by the laws of Massachusetts, and shall be brought and maintained in a State or federal court in Massachusetts which shall have exclusive jurisdiction thereof. The Department, with the approval of the Attorney General's Office, and the Contractor may agree to voluntary mediation through the Massachusetts Office of Dispute Resolution (MODR) of any Contract dispute and will share the costs of such mediation. No legal or equitable rights of the parties shall be limited by this Section.

15. **Contract Boilerplate Interpretation, Severability, Conflicts With Law, Integration.** Any amendment or attachment to any Contract which contains conflicting language or has the affect of a deleting, replacing or modifying any printed language of these Commonwealth Terms and Conditions, as officially published by ANF, CTR and OSD, shall be interpreted as superseded by the official printed language. If any provision of a Contract is found to be superseded by state or federal law or regulation, in whole or in part, then both parties shall be relieved of all obligations under that provision only to the

extent necessary to comply with the superseding law, provided however, that the remaining provisions of the Contract, or portions thereof, shall be enforced to the fullest extent permitted by law. All amendments must be executed by the parties in accordance with Section 1. of these Commonwealth Terms and Conditions and filed with the original record copy of a Contract as prescribed by CTR. The printed language of the Standard Contract Form, as officially published by ANF, CTR and OSD, which incorporates by reference these Commonwealth Terms and Conditions, shall supersede any conflicting verbal or written agreements relating to the performance of a Contract, or attached thereto, including contract forms, purchase orders or invoices of the Contractor. The order of priority of documents to interpret a Contract shall be as follows: the printed language of the Commonwealth Terms and Conditions, the Standard Contract Form, the Department's Request for Response (RFR) solicitation document and the Contractor's Response to the RFR solicitation, excluding any language stricken by a Department as unacceptable and including any negotiated terms and conditions allowable pursuant to law or regulation.

IN WITNESS WHEREOF, The Contractor certify under the pains and penalties of perjury that it shall comply with these Commonwealth Terms and Conditions for any applicable Contract executed with the Commonwealth as certified by their authorized signatory below:

CONTRACTOR AUTHORIZED SIGNATORY: _____ (signature)

Print Name: _____

Title: _____

Date: _____

(Check One): _____ Organization _____ Individual

Full Legal Organization or Individual Name: _____

Doing Business As: Name (If Different): _____

Tax Identification Number: _____

Address: _____

Telephone: _____ FAX: _____

INSTRUCTIONS FOR FILING THE COMMONWEALTH TERMS AND CONDITIONS

A "Request for Verification of Taxation Reporting Information" form (Massachusetts Substitute W-9 Format), that contains the Contractor's correct TIN, name and legal address information, must be on file with the Office of the Comptroller. If the Contractor has not previously filed this form with the Comptroller, or if the information contained on a previously filed form has changed, please fill out a W-9 form and return it attached to the executed COMMONWEALTH TERMS AND CONDITIONS.

If the Contractor is responding to a Request for Response (RFR), the COMMONWEALTH TERMS AND CONDITIONS must be submitted with the Response to RFR or as specified in the RFR. Otherwise, Departments or Contractors must timely submit the completed and properly executed COMMONWEALTH TERMS AND CONDITIONS (and the W-9 form if applicable) to the: **Payee and Payments Unit, Office of the Comptroller, 9th Floor, One Ashburton Place, Boston, MA 02108** in order to record the filing of this form on the MMARS Vendor File. Contractors are required to execute and file this form only once.



**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**

CHARLES D. BAKER
Governor

ROSALIN ACOSTA
Secretary

KARYN E. POLITO
Lt. Governor

WILLIAM D MCKINNEY
Director

Awarding Authority: Bunker Hill Community College
Contract Number: **City/Town:** BOSTON
Description of Work: Supply and install audio video equipment in Student Central

Job Location: 250 New Rutherford Ave

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 Department of Labor Standards, Division of Apprentice Standards (DLS/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. **Any apprentice not registered with DLS/DAS regardless of whether or not they are registered with any other federal, state, local, or private agency 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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	06/01/2019	\$35.35	\$11.91	\$12.70	\$0.00	\$59.96
	08/01/2019	\$35.35	\$12.41	\$12.70	\$0.00	\$60.46
	12/01/2019	\$35.35	\$12.41	\$13.72	\$0.00	\$61.48
	06/01/2020	\$36.25	\$12.41	\$13.72	\$0.00	\$62.38
	08/01/2020	\$36.25	\$12.91	\$13.72	\$0.00	\$62.88
	12/01/2020	\$36.25	\$12.91	\$14.82	\$0.00	\$63.98
	06/01/2021	\$37.05	\$12.91	\$14.82	\$0.00	\$64.78
	08/01/2021	\$37.05	\$13.41	\$14.82	\$0.00	\$65.28
	12/01/2021	\$37.05	\$13.41	\$16.01	\$0.00	\$66.47
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	06/01/2019	\$35.42	\$11.91	\$12.70	\$0.00	\$60.03
	08/01/2019	\$35.42	\$12.41	\$12.70	\$0.00	\$60.53
	12/01/2019	\$35.42	\$12.41	\$13.72	\$0.00	\$61.55
	06/01/2020	\$36.32	\$12.41	\$13.72	\$0.00	\$62.45
	08/01/2020	\$36.32	\$12.91	\$13.72	\$0.00	\$62.95
	12/01/2020	\$36.32	\$12.91	\$14.82	\$0.00	\$64.05
	06/01/2021	\$37.12	\$12.91	\$14.82	\$0.00	\$64.85
	08/01/2021	\$37.12	\$13.41	\$14.82	\$0.00	\$65.35
	12/01/2021	\$37.12	\$13.41	\$16.01	\$0.00	\$66.54
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	06/01/2019	\$35.54	\$11.91	\$12.70	\$0.00	\$60.15
	08/01/2019	\$35.54	\$12.41	\$12.70	\$0.00	\$60.65
	12/01/2019	\$35.54	\$12.41	\$13.72	\$0.00	\$61.67
	06/01/2020	\$36.44	\$12.41	\$13.72	\$0.00	\$62.57
	08/01/2020	\$36.44	\$12.91	\$13.72	\$0.00	\$63.07
	12/01/2020	\$36.44	\$12.91	\$14.82	\$0.00	\$64.17
	06/01/2021	\$37.24	\$12.91	\$14.82	\$0.00	\$64.97
	08/01/2021	\$37.24	\$13.41	\$14.82	\$0.00	\$65.47
	12/01/2021	\$37.24	\$13.41	\$16.01	\$0.00	\$66.66
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$97.80	\$9.90	\$21.15	\$0.00	\$128.85
	08/01/2019	\$102.78	\$9.90	\$21.15	\$0.00	\$133.83
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR <i>LABORERS - ZONE 1</i>	06/01/2019	\$40.40	\$7.85	\$15.35	\$0.00	\$63.60
	12/01/2019	\$41.40	\$7.85	\$15.35	\$0.00	\$64.60
	06/01/2020	\$42.39	\$7.85	\$15.35	\$0.00	\$65.59
	12/01/2020	\$43.37	\$7.85	\$15.35	\$0.00	\$66.57
	06/01/2021	\$44.39	\$7.85	\$15.35	\$0.00	\$67.59
	12/01/2021	\$45.40	\$7.85	\$15.35	\$0.00	\$68.60
For apprentice rates see "Apprentice- LABORER"						
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	06/01/2019	\$36.40	\$12.50	\$8.50	\$0.00	\$57.40
	12/01/2019	\$37.40	\$12.50	\$8.50	\$0.00	\$58.40
	06/01/2020	\$38.40	\$12.50	\$8.50	\$0.00	\$59.40
	12/01/2020	\$39.40	\$12.50	\$8.50	\$0.00	\$60.40

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASPHALT RAKER <i>LABORERS - ZONE 1</i>	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$48.18	\$12.00	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.33	\$12.00	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.43	\$12.00	\$15.60	\$0.00	\$78.03
	12/01/2020	\$51.58	\$12.00	\$15.60	\$0.00	\$79.18
	06/01/2021	\$52.68	\$12.00	\$15.60	\$0.00	\$80.28
	12/01/2021	\$53.83	\$12.00	\$15.60	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$48.18	\$12.00	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.33	\$12.00	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.43	\$12.00	\$15.60	\$0.00	\$78.03
	12/01/2020	\$51.58	\$12.00	\$15.60	\$0.00	\$79.18
	06/01/2021	\$52.68	\$12.00	\$15.60	\$0.00	\$80.28
	12/01/2021	\$53.83	\$12.00	\$15.60	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 1</i>	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 1</i>	06/01/2019	\$40.40	\$7.85	\$15.35	\$0.00	\$63.60
	12/01/2019	\$41.40	\$7.85	\$15.35	\$0.00	\$64.60
	06/01/2020	\$42.39	\$7.85	\$15.35	\$0.00	\$65.59
	12/01/2020	\$43.37	\$7.85	\$15.35	\$0.00	\$66.57
	06/01/2021	\$44.39	\$7.85	\$15.35	\$0.00	\$67.59
	12/01/2021	\$45.40	\$7.85	\$15.35	\$0.00	\$68.60
For apprentice rates see "Apprentice- LABORER"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2019	\$44.71	\$7.07	\$17.72	\$0.00	\$69.50
	01/01/2020	\$46.10	\$7.07	\$17.98	\$0.00	\$71.15

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$29.06	\$7.07	\$11.52	\$0.00	\$47.65
2	65	\$29.06	\$7.07	\$11.52	\$0.00	\$47.65
3	70	\$31.30	\$7.07	\$12.40	\$0.00	\$50.77
4	75	\$33.53	\$7.07	\$13.30	\$0.00	\$53.90
5	80	\$35.77	\$7.07	\$14.18	\$0.00	\$57.02
6	85	\$38.00	\$7.07	\$15.07	\$0.00	\$60.14
7	90	\$40.24	\$7.07	\$15.95	\$0.00	\$63.26
8	95	\$42.47	\$7.07	\$16.84	\$0.00	\$66.38

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
2	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
3	70	\$32.27	\$7.07	\$12.59	\$0.00	\$51.93
4	75	\$34.58	\$7.07	\$13.49	\$0.00	\$55.14
5	80	\$36.88	\$7.07	\$14.38	\$0.00	\$58.33
6	85	\$39.19	\$7.07	\$15.29	\$0.00	\$61.55
7	90	\$41.49	\$7.07	\$16.18	\$0.00	\$64.74
8	95	\$43.80	\$7.07	\$17.09	\$0.00	\$67.96

Notes:

Apprentice to Journeyworker Ratio:1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	02/01/2019	\$53.55	\$10.75	\$20.66	\$0.00	\$84.96
BRICKLAYERS LOCAL 3 (BOSTON)	08/01/2019	\$54.90	\$10.75	\$20.80	\$0.00	\$86.45
	02/01/2020	\$55.54	\$10.75	\$20.80	\$0.00	\$87.09
	08/01/2020	\$56.89	\$10.75	\$20.95	\$0.00	\$88.59
	02/01/2021	\$57.53	\$10.75	\$20.95	\$0.00	\$89.23
	08/01/2021	\$58.93	\$10.75	\$21.11	\$0.00	\$90.79
	02/01/2022	\$59.52	\$10.75	\$21.11	\$0.00	\$91.38

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.78	\$10.75	\$20.66	\$0.00	\$58.19
2	60	\$32.13	\$10.75	\$20.66	\$0.00	\$63.54
3	70	\$37.49	\$10.75	\$20.66	\$0.00	\$68.90
4	80	\$42.84	\$10.75	\$20.66	\$0.00	\$74.25
5	90	\$48.20	\$10.75	\$20.66	\$0.00	\$79.61

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.45	\$10.75	\$20.80	\$0.00	\$59.00
2	60	\$32.94	\$10.75	\$20.80	\$0.00	\$64.49
3	70	\$38.43	\$10.75	\$20.80	\$0.00	\$69.98
4	80	\$43.92	\$10.75	\$20.80	\$0.00	\$75.47
5	90	\$49.41	\$10.75	\$20.80	\$0.00	\$80.96

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER	06/01/2019	\$47.69	\$12.00	\$15.60	\$0.00	\$75.29
<i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2019	\$48.83	\$12.00	\$15.60	\$0.00	\$76.43
	06/01/2020	\$49.91	\$12.00	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.05	\$12.00	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.14	\$12.00	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.28	\$12.00	\$15.60	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN	06/01/2019	\$40.75	\$7.85	\$15.55	\$0.00	\$64.15
<i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2019	\$41.75	\$7.85	\$15.55	\$0.00	\$65.15
	06/01/2020	\$42.74	\$7.85	\$15.55	\$0.00	\$66.14
	12/01/2020	\$43.72	\$7.85	\$15.55	\$0.00	\$67.12
	06/01/2021	\$44.74	\$7.85	\$15.55	\$0.00	\$68.14
	12/01/2021	\$45.75	\$7.85	\$15.55	\$0.00	\$69.15

For apprentice rates see "Apprentice- LABORER"

CAISSON & UNDERPINNING LABORER	06/01/2019	\$39.60	\$7.85	\$15.55	\$0.00	\$63.00
<i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2019	\$40.60	\$7.85	\$15.55	\$0.00	\$64.00
	06/01/2020	\$41.59	\$7.85	\$15.55	\$0.00	\$64.99
	12/01/2020	\$42.57	\$7.85	\$15.55	\$0.00	\$65.97
	06/01/2021	\$43.59	\$7.85	\$15.55	\$0.00	\$66.99
	12/01/2021	\$44.60	\$7.85	\$15.55	\$0.00	\$68.00

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2019	\$39.60	\$7.85	\$15.55	\$0.00	\$63.00
	12/01/2019	\$40.60	\$7.85	\$15.55	\$0.00	\$64.00
	06/01/2020	\$41.59	\$7.85	\$15.55	\$0.00	\$64.99
	12/01/2020	\$42.57	\$7.85	\$15.55	\$0.00	\$65.97
	06/01/2021	\$43.59	\$7.85	\$15.55	\$0.00	\$66.99
	12/01/2021	\$44.60	\$7.85	\$15.55	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 1</i>	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS -ZONE 1 (Metro Boston)</i>	03/01/2019	\$49.84	\$9.90	\$17.50	\$0.00	\$77.24

Apprentice - CARPENTER - Zone 1 Metro Boston

Effective Date - 03/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.92	\$9.90	\$1.73	\$0.00	\$36.55
2	60	\$29.90	\$9.90	\$1.73	\$0.00	\$41.53
3	70	\$34.89	\$9.90	\$12.31	\$0.00	\$57.10
4	75	\$37.38	\$9.90	\$12.31	\$0.00	\$59.59
5	80	\$39.87	\$9.90	\$14.04	\$0.00	\$63.81
6	80	\$39.87	\$9.90	\$14.04	\$0.00	\$63.81
7	90	\$44.86	\$9.90	\$15.77	\$0.00	\$70.53
8	90	\$44.86	\$9.90	\$15.77	\$0.00	\$70.53

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 \$34.06/ 3&4 \$40.71/ 5&6 \$58.83/ 7&8 \$65.54

Apprentice to Journeyworker Ratio:1:5

CARPENTER WOOD FRAME <i>CARPENTERS -ZONE 1 (Wood Frame)</i>	04/01/2019	\$32.49	\$7.07	\$7.86	\$0.00	\$47.42
	10/01/2019	\$32.97	\$7.07	\$7.86	\$0.00	\$47.90

All Aspects of New Wood Frame Work

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CARPENTER (Wood Frame) - Zone 1

Effective Date - 04/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.49	\$7.07	\$0.00	\$0.00	\$26.56
2	60	\$19.49	\$7.07	\$0.00	\$0.00	\$26.56
3	65	\$21.12	\$7.07	\$7.86	\$0.00	\$36.05
4	70	\$22.74	\$7.07	\$7.86	\$0.00	\$37.67
5	75	\$24.37	\$7.07	\$7.86	\$0.00	\$39.30
6	80	\$25.99	\$7.07	\$7.86	\$0.00	\$40.92
7	85	\$27.62	\$7.07	\$7.86	\$0.00	\$42.55
8	90	\$29.24	\$7.07	\$7.86	\$0.00	\$44.17

Effective Date - 10/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.78	\$7.07	\$0.00	\$0.00	\$26.85
2	60	\$19.78	\$7.07	\$0.00	\$0.00	\$26.85
3	65	\$21.43	\$7.07	\$7.86	\$0.00	\$36.36
4	70	\$23.08	\$7.07	\$7.86	\$0.00	\$38.01
5	75	\$24.73	\$7.07	\$7.86	\$0.00	\$39.66
6	80	\$26.38	\$7.07	\$7.86	\$0.00	\$41.31
7	85	\$28.02	\$7.07	\$7.86	\$0.00	\$42.95
8	90	\$29.67	\$7.07	\$7.86	\$0.00	\$44.60

Notes:
 % Indentured After 10/1/17; 45/45/55/55/70/70/80/80
 Step 1&2 \$21.69/ 3&4 \$29.69/ 5&6 \$37.67/ 7&8 \$40.92

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING BRICKLAYERS LOCAL 3 (BOSTON)	01/01/2019	\$47.50	\$12.50	\$22.41	\$0.30	\$82.71
	07/01/2019	\$48.24	\$12.50	\$22.41	\$0.30	\$83.45
	01/01/2020	\$49.64	\$12.50	\$22.41	\$0.30	\$84.85

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.75	\$12.50	\$15.41	\$0.00	\$51.66
2	60	\$28.50	\$12.50	\$17.41	\$0.30	\$58.71
3	65	\$30.88	\$12.50	\$18.41	\$0.30	\$62.09
4	70	\$33.25	\$12.50	\$19.41	\$0.30	\$65.46
5	75	\$35.63	\$12.50	\$20.41	\$0.30	\$68.84
6	80	\$38.00	\$12.50	\$21.41	\$0.30	\$72.21
7	90	\$42.75	\$12.50	\$22.41	\$0.30	\$77.96

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.12	\$12.50	\$15.41	\$0.00	\$52.03
2	60	\$28.94	\$12.50	\$17.41	\$0.30	\$59.15
3	65	\$31.36	\$12.50	\$18.41	\$0.30	\$62.57
4	70	\$33.77	\$12.50	\$19.41	\$0.30	\$65.98
5	75	\$36.18	\$12.50	\$20.41	\$0.30	\$69.39
6	80	\$38.59	\$12.50	\$21.41	\$0.30	\$72.80
7	90	\$43.42	\$12.50	\$22.41	\$0.30	\$78.63

Notes:

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

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
LABORERS - ZONE 1	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES	06/01/2019	\$49.18	\$12.00	\$15.60	\$0.00	\$76.78
OPERATING ENGINEERS LOCAL 4	12/01/2019	\$50.33	\$12.00	\$15.60	\$0.00	\$77.93
	06/01/2020	\$51.43	\$12.00	\$15.60	\$0.00	\$79.03
	12/01/2020	\$52.58	\$12.00	\$15.60	\$0.00	\$80.18
	06/01/2021	\$53.68	\$12.00	\$15.60	\$0.00	\$81.28
	12/01/2021	\$54.83	\$12.00	\$15.60	\$0.00	\$82.43

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

COMPRESSOR OPERATOR	06/01/2019	\$32.28	\$12.00	\$15.60	\$0.00	\$59.88
OPERATING ENGINEERS LOCAL 4	12/01/2019	\$33.07	\$12.00	\$15.60	\$0.00	\$60.67
	06/01/2020	\$33.82	\$12.00	\$15.60	\$0.00	\$61.42
	12/01/2020	\$34.60	\$12.00	\$15.60	\$0.00	\$62.20
	06/01/2021	\$35.35	\$12.00	\$15.60	\$0.00	\$62.95
	12/01/2021	\$36.14	\$12.00	\$15.60	\$0.00	\$63.74

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DELEADER (BRIDGE) PAINTERS LOCAL 35 - ZONE 1	01/01/2019	\$50.36	\$8.15	\$20.85	\$0.00	\$79.36
	07/01/2019	\$50.66	\$8.20	\$21.45	\$0.00	\$80.31
	01/01/2020	\$50.96	\$8.20	\$22.10	\$0.00	\$81.26
	07/01/2020	\$52.06	\$8.20	\$22.10	\$0.00	\$82.36
	01/01/2021	\$53.16	\$8.20	\$22.10	\$0.00	\$83.46

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.18	\$8.15	\$0.00	\$0.00	\$33.33
2	55	\$27.70	\$8.15	\$5.64	\$0.00	\$41.49
3	60	\$30.22	\$8.15	\$6.15	\$0.00	\$44.52
4	65	\$32.73	\$8.15	\$6.66	\$0.00	\$47.54
5	70	\$35.25	\$8.15	\$17.78	\$0.00	\$61.18
6	75	\$37.77	\$8.15	\$18.29	\$0.00	\$64.21
7	80	\$40.29	\$8.15	\$18.80	\$0.00	\$67.24
8	90	\$45.32	\$8.15	\$19.83	\$0.00	\$73.30

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.33	\$8.20	\$0.00	\$0.00	\$33.53
2	55	\$27.86	\$8.20	\$5.78	\$0.00	\$41.84
3	60	\$30.40	\$8.20	\$6.30	\$0.00	\$44.90
4	65	\$32.93	\$8.20	\$6.83	\$0.00	\$47.96
5	70	\$35.46	\$8.20	\$18.30	\$0.00	\$61.96
6	75	\$38.00	\$8.20	\$18.83	\$0.00	\$65.03
7	80	\$40.53	\$8.20	\$19.35	\$0.00	\$68.08
8	90	\$45.59	\$8.20	\$20.40	\$0.00	\$74.19

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN LABORERS - ZONE 1	06/01/2019	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	12/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 1	06/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00
	12/01/2019	\$41.80	\$7.85	\$15.35	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS LABORERS - ZONE 1	06/01/2019	\$40.55	\$7.85	\$15.35	\$0.00	\$63.75
	12/01/2019	\$41.55	\$7.85	\$15.35	\$0.00	\$64.75
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 1	06/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00
	12/01/2019	\$41.80	\$7.85	\$15.35	\$0.00	\$65.00
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 1</i>	06/01/2019	\$40.55	\$7.85	\$15.35	\$0.00	\$63.75
	12/01/2019	\$41.55	\$7.85	\$15.35	\$0.00	\$64.75
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 1</i>	06/01/2019	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	12/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$47.69	\$12.00	\$15.60	\$0.00	\$75.29
	12/01/2019	\$48.83	\$12.00	\$15.60	\$0.00	\$76.43
	06/01/2020	\$49.91	\$12.00	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.05	\$12.00	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.14	\$12.00	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.28	\$12.00	\$15.60	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$65.20	\$9.90	\$21.15	\$0.00	\$96.25
	08/01/2019	\$68.52	\$9.90	\$21.15	\$0.00	\$99.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$46.57	\$9.90	\$21.15	\$0.00	\$77.62
	08/01/2019	\$48.94	\$9.90	\$21.15	\$0.00	\$79.99
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$69.86	\$9.90	\$21.15	\$0.00	\$100.91
	08/01/2019	\$73.41	\$9.90	\$21.15	\$0.00	\$104.46
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$97.80	\$9.90	\$21.15	\$0.00	\$128.85
	08/01/2019	\$102.78	\$9.90	\$21.15	\$0.00	\$133.83
For apprentice rates see "Apprentice- PILE DRIVER"						
DRAWBRIDGE OPERATOR (Construction) <i>ELECTRICIANS LOCAL 103</i>	03/01/2019	\$51.10	\$13.00	\$18.88	\$0.00	\$82.98
For apprentice rates see "Apprentice- ELECTRICIAN"						
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2019	\$51.10	\$13.00	\$18.88	\$0.00	\$82.98

Apprentice - ELECTRICIAN - Local 103

Effective Date - 03/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$20.44	\$13.00	\$0.61	\$0.00	\$34.05
2	40	\$20.44	\$13.00	\$0.61	\$0.00	\$34.05
3	45	\$23.00	\$13.00	\$14.34	\$0.00	\$50.34
4	45	\$23.00	\$13.00	\$14.34	\$0.00	\$50.34
5	50	\$25.55	\$13.00	\$14.76	\$0.00	\$53.31
6	55	\$28.11	\$13.00	\$15.17	\$0.00	\$56.28
7	60	\$30.66	\$13.00	\$15.58	\$0.00	\$59.24
8	65	\$33.22	\$13.00	\$16.00	\$0.00	\$62.22
9	70	\$35.77	\$13.00	\$16.40	\$0.00	\$65.17
10	75	\$38.33	\$13.00	\$16.82	\$0.00	\$68.15

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

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR	01/01/2019	\$59.47	\$15.58	\$17.51	\$0.00	\$92.56
ELEVATOR CONSTRUCTORS LOCAL 4	01/01/2020	\$61.42	\$15.73	\$18.41	\$0.00	\$95.56
	01/01/2021	\$63.47	\$15.88	\$19.31	\$0.00	\$98.66
	01/01/2022	\$65.62	\$16.03	\$20.21	\$0.00	\$101.86

Apprentice - ELEVATOR CONSTRUCTOR - Local 4

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$29.74	\$15.58	\$0.00	\$0.00	\$45.32
2	55	\$32.71	\$15.58	\$17.51	\$0.00	\$65.80
3	65	\$38.66	\$15.58	\$17.51	\$0.00	\$71.75
4	70	\$41.63	\$15.58	\$17.51	\$0.00	\$74.72
5	80	\$47.58	\$15.58	\$17.51	\$0.00	\$80.67

Effective Date - 01/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$30.71	\$15.73	\$0.00	\$0.00	\$46.44
2	55	\$33.78	\$15.73	\$18.41	\$0.00	\$67.92
3	65	\$39.92	\$15.73	\$18.41	\$0.00	\$74.06
4	70	\$42.99	\$15.73	\$18.41	\$0.00	\$77.13
5	80	\$49.14	\$15.73	\$18.41	\$0.00	\$83.28

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

Apprentice to Journeyworker Ratio:1:1

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2019	\$41.63	\$15.58	\$17.51	\$0.00	\$74.72
	01/01/2020	\$42.99	\$15.73	\$18.41	\$0.00	\$77.13
	01/01/2021	\$44.43	\$15.88	\$19.31	\$0.00	\$79.62
	01/01/2022	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR <i>LABORERS - ZONE 1</i>	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	05/01/2019	\$43.68	\$11.50	\$15.60	\$0.00	\$70.78
	11/01/2019	\$44.68	\$11.50	\$15.60	\$0.00	\$71.78
	05/01/2020	\$45.83	\$11.50	\$15.60	\$0.00	\$72.93
	11/01/2020	\$46.83	\$11.50	\$15.60	\$0.00	\$73.93
	05/01/2021	\$47.98	\$11.50	\$15.60	\$0.00	\$75.08
	11/01/2021	\$48.98	\$11.50	\$15.60	\$0.00	\$76.08
	05/01/2022	\$50.13	\$11.50	\$15.60	\$0.00	\$77.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	05/01/2019	\$45.17	\$11.50	\$15.60	\$0.00	\$72.27
	11/01/2019	\$46.18	\$11.50	\$15.60	\$0.00	\$73.28
	05/01/2020	\$47.33	\$11.50	\$15.60	\$0.00	\$74.43
	11/01/2020	\$48.34	\$11.50	\$15.60	\$0.00	\$75.44
	05/01/2021	\$49.50	\$11.50	\$15.60	\$0.00	\$76.60
	11/01/2021	\$50.51	\$11.50	\$15.60	\$0.00	\$77.61
	05/01/2022	\$51.67	\$11.50	\$15.60	\$0.00	\$78.77
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	05/01/2019	\$22.48	\$11.50	\$15.60	\$0.00	\$49.58
	11/01/2019	\$23.07	\$11.50	\$15.60	\$0.00	\$50.17
	05/01/2020	\$23.74	\$11.50	\$15.60	\$0.00	\$50.84
	11/01/2020	\$24.33	\$11.50	\$15.60	\$0.00	\$51.43
	05/01/2021	\$25.01	\$11.50	\$15.60	\$0.00	\$52.11
	11/01/2021	\$25.61	\$11.50	\$15.60	\$0.00	\$52.71
	05/01/2022	\$26.28	\$11.50	\$15.60	\$0.00	\$53.38
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	03/01/2019	\$51.10	\$13.00	\$18.88	\$0.00	\$82.98
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS LOCAL 103</i>	03/01/2019	\$38.33	\$13.00	\$16.82	\$0.00	\$68.15
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$39.54	\$12.00	\$15.60	\$0.00	\$67.14
	12/01/2019	\$40.49	\$12.00	\$15.60	\$0.00	\$68.09
	06/01/2020	\$41.40	\$12.00	\$15.60	\$0.00	\$69.00
	12/01/2020	\$42.35	\$12.00	\$15.60	\$0.00	\$69.95
	06/01/2021	\$43.26	\$12.00	\$15.60	\$0.00	\$70.86
	12/01/2021	\$44.21	\$12.00	\$15.60	\$0.00	\$71.81
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER <i>LABORERS - ZONE 1</i>	06/01/2019	\$22.50	\$7.85	\$15.35	\$0.00	\$45.70
	12/01/2019	\$23.50	\$7.85	\$15.35	\$0.00	\$46.70
	06/01/2020	\$23.50	\$7.85	\$15.35	\$0.00	\$46.70
	12/01/2020	\$24.50	\$7.85	\$15.35	\$0.00	\$47.70
	06/01/2021	\$24.50	\$7.85	\$15.35	\$0.00	\$47.70
	12/01/2021	\$24.50	\$7.85	\$15.35	\$0.00	\$47.70
For apprentice rates see "Apprentice- LABORER"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE 1</i>	03/01/2016	\$42.13	\$9.80	\$17.62	\$0.00	\$69.55

Apprentice - FLOORCOVERER - Local 2168 Zone 1

Effective Date - 03/01/2016

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.07	\$9.80	\$1.79	\$0.00	\$32.66
2	55	\$23.17	\$9.80	\$1.79	\$0.00	\$34.76
3	60	\$25.28	\$9.80	\$12.25	\$0.00	\$47.33
4	65	\$27.38	\$9.80	\$12.25	\$0.00	\$49.43
5	70	\$29.49	\$9.80	\$14.04	\$0.00	\$53.33
6	75	\$31.60	\$9.80	\$14.04	\$0.00	\$55.44
7	80	\$33.70	\$9.80	\$15.83	\$0.00	\$59.33
8	85	\$35.81	\$9.80	\$15.83	\$0.00	\$61.44

Notes: Steps are 750 hrs.

% After 09/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)

Step 1&2 \$30.55/ 3&4 \$36.49/ 5&6 \$53.33/ 7&8 \$59.33

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$48.18	\$12.00	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.33	\$12.00	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.43	\$12.00	\$15.60	\$0.00	\$78.03
	12/01/2020	\$51.58	\$12.00	\$15.60	\$0.00	\$79.18
	06/01/2021	\$52.68	\$12.00	\$15.60	\$0.00	\$80.28
	12/01/2021	\$53.83	\$12.00	\$15.60	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATOR/LIGHTING PLANT/HEATERS <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$32.28	\$12.00	\$15.60	\$0.00	\$59.88
	12/01/2019	\$33.07	\$12.00	\$15.60	\$0.00	\$60.67
	06/01/2020	\$33.82	\$12.00	\$15.60	\$0.00	\$61.42
	12/01/2020	\$34.60	\$12.00	\$15.60	\$0.00	\$62.20
	06/01/2021	\$35.35	\$12.00	\$15.60	\$0.00	\$62.95
	12/01/2021	\$36.14	\$12.00	\$15.60	\$0.00	\$63.74

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 35 (ZONE 1)</i>	01/01/2019	\$45.65	\$8.15	\$20.85	\$0.00	\$74.65
	07/01/2019	\$45.95	\$8.20	\$21.45	\$0.00	\$75.60
	01/01/2020	\$46.25	\$8.20	\$22.10	\$0.00	\$76.55
	07/01/2020	\$47.35	\$8.20	\$22.10	\$0.00	\$77.65
	01/01/2021	\$48.45	\$8.20	\$22.10	\$0.00	\$78.75

Apprentice - GLAZIER - Local 35 Zone 1

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.83	\$8.15	\$0.00	\$0.00	\$30.98
2	55	\$25.11	\$8.15	\$5.64	\$0.00	\$38.90
3	60	\$27.39	\$8.15	\$6.15	\$0.00	\$41.69
4	65	\$29.67	\$8.15	\$6.66	\$0.00	\$44.48
5	70	\$31.96	\$8.15	\$17.78	\$0.00	\$57.89
6	75	\$34.24	\$8.15	\$18.29	\$0.00	\$60.68
7	80	\$36.52	\$8.15	\$18.80	\$0.00	\$63.47
8	90	\$41.09	\$8.15	\$19.83	\$0.00	\$69.07

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.98	\$8.20	\$0.00	\$0.00	\$31.18
2	55	\$25.27	\$8.20	\$5.78	\$0.00	\$39.25
3	60	\$27.57	\$8.20	\$6.30	\$0.00	\$42.07
4	65	\$29.87	\$8.20	\$6.83	\$0.00	\$44.90
5	70	\$32.17	\$8.20	\$18.30	\$0.00	\$58.67
6	75	\$34.46	\$8.20	\$18.83	\$0.00	\$61.49
7	80	\$36.76	\$8.20	\$19.35	\$0.00	\$64.31
8	90	\$41.36	\$8.20	\$20.40	\$0.00	\$69.96

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

HOISTING ENGINEER/CRANES/GRADALLS <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$48.18	\$12.00	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.33	\$12.00	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.43	\$12.00	\$15.60	\$0.00	\$78.03
	12/01/2020	\$51.58	\$12.00	\$15.60	\$0.00	\$79.18
	06/01/2021	\$52.68	\$12.00	\$15.60	\$0.00	\$80.28
	12/01/2021	\$53.83	\$12.00	\$15.60	\$0.00	\$81.43

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 06/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$26.50	\$12.00	\$0.00	\$0.00	\$38.50
2	60	\$28.91	\$12.00	\$15.60	\$0.00	\$56.51
3	65	\$31.32	\$12.00	\$15.60	\$0.00	\$58.92
4	70	\$33.73	\$12.00	\$15.60	\$0.00	\$61.33
5	75	\$36.14	\$12.00	\$15.60	\$0.00	\$63.74
6	80	\$38.54	\$12.00	\$15.60	\$0.00	\$66.14
7	85	\$40.95	\$12.00	\$15.60	\$0.00	\$68.55
8	90	\$43.36	\$12.00	\$15.60	\$0.00	\$70.96

Effective Date - 12/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$27.13	\$12.00	\$0.00	\$0.00	\$39.13
2	60	\$29.60	\$12.00	\$15.60	\$0.00	\$57.20
3	65	\$32.06	\$12.00	\$15.60	\$0.00	\$59.66
4	70	\$34.53	\$12.00	\$15.60	\$0.00	\$62.13
5	75	\$37.00	\$12.00	\$15.60	\$0.00	\$64.60
6	80	\$39.46	\$12.00	\$15.60	\$0.00	\$67.06
7	85	\$41.93	\$12.00	\$15.60	\$0.00	\$69.53
8	90	\$44.40	\$12.00	\$15.60	\$0.00	\$72.00

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 - A	02/01/2019	\$46.50	\$13.20	\$24.12	\$2.52	\$86.34
	08/01/2019	\$48.10	\$13.20	\$24.12	\$2.56	\$87.98
	02/01/2020	\$49.75	\$13.20	\$24.12	\$2.61	\$89.68
	08/01/2020	\$51.35	\$13.20	\$24.12	\$2.66	\$91.33
	02/01/2021	\$53.00	\$13.20	\$24.12	\$2.71	\$93.03
	08/01/2021	\$54.75	\$13.20	\$24.12	\$2.76	\$94.83
	02/01/2022	\$56.50	\$13.20	\$24.12	\$2.81	\$96.63

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 103	03/01/2019	\$51.10	\$13.00	\$18.88	\$0.00	\$82.98
--	------------	---------	---------	---------	--------	---------

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 - A	02/01/2019	\$46.50	\$13.20	\$24.12	\$2.52	\$86.34
	08/01/2019	\$48.10	\$13.20	\$24.12	\$2.56	\$87.98
	02/01/2020	\$49.75	\$13.20	\$24.12	\$2.61	\$89.68
	08/01/2020	\$51.35	\$13.20	\$24.12	\$2.66	\$91.33
	02/01/2021	\$53.00	\$13.20	\$24.12	\$2.71	\$93.03
	08/01/2021	\$54.75	\$13.20	\$24.12	\$2.76	\$94.83
	02/01/2022	\$56.50	\$13.20	\$24.12	\$2.81	\$96.63

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (TESTING AND BALANCING -WATER) <i>PIPEFITTERS LOCAL 537</i>	03/01/2019	\$53.19	\$10.95	\$19.74	\$0.00	\$83.88
	09/01/2019	\$54.69	\$10.95	\$19.74	\$0.00	\$85.38
	03/01/2020	\$56.19	\$10.95	\$19.74	\$0.00	\$86.88
	09/01/2020	\$57.69	\$10.95	\$19.74	\$0.00	\$88.38
	03/01/2021	\$59.19	\$10.95	\$19.74	\$0.00	\$89.88
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC <i>PIPEFITTERS LOCAL 537</i>	03/01/2019	\$53.19	\$10.95	\$19.74	\$0.00	\$83.88
	09/01/2019	\$54.69	\$10.95	\$19.74	\$0.00	\$85.38
	03/01/2020	\$56.19	\$10.95	\$19.74	\$0.00	\$86.88
	09/01/2020	\$57.69	\$10.95	\$19.74	\$0.00	\$88.38
	03/01/2021	\$59.19	\$10.95	\$19.74	\$0.00	\$89.88
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS <i>LABORERS - ZONE 1</i>	06/01/2019	\$40.40	\$7.85	\$15.35	\$0.00	\$63.60
	12/01/2019	\$41.40	\$7.85	\$15.35	\$0.00	\$64.60
	06/01/2020	\$42.39	\$7.85	\$15.35	\$0.00	\$65.59
	12/01/2020	\$43.37	\$7.85	\$15.35	\$0.00	\$66.57
	06/01/2021	\$44.39	\$7.85	\$15.35	\$0.00	\$67.59
	12/01/2021	\$45.40	\$7.85	\$15.35	\$0.00	\$68.60
For apprentice rates see "Apprentice- LABORER"						
INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	09/01/2018	\$47.09	\$12.50	\$15.60	\$0.00	\$75.19
	09/01/2019	\$49.59	\$12.50	\$15.60	\$0.00	\$77.69

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

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.55	\$12.50	\$11.40	\$0.00	\$47.45
2	60	\$28.25	\$12.50	\$12.24	\$0.00	\$52.99
3	70	\$32.96	\$12.50	\$13.08	\$0.00	\$58.54
4	80	\$37.67	\$12.50	\$13.92	\$0.00	\$64.09

Effective Date - 09/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.80	\$12.50	\$11.40	\$0.00	\$48.70
2	60	\$29.75	\$12.50	\$12.24	\$0.00	\$54.49
3	70	\$34.71	\$12.50	\$13.08	\$0.00	\$60.29
4	80	\$39.67	\$12.50	\$13.92	\$0.00	\$66.09

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER <i>IRONWORKERS LOCAL 7 (BOSTON AREA)</i>	03/16/2019	\$46.66	\$8.00	\$23.50	\$0.00	\$78.16
---	------------	---------	--------	---------	--------	---------

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - IRONWORKER - Local 7 Boston

Effective Date - 03/16/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$28.00	\$8.00	\$23.50	\$0.00	\$59.50
2	70	\$32.66	\$8.00	\$23.50	\$0.00	\$64.16
3	75	\$35.00	\$8.00	\$23.50	\$0.00	\$66.50
4	80	\$37.33	\$8.00	\$23.50	\$0.00	\$68.83
5	85	\$39.66	\$8.00	\$23.50	\$0.00	\$71.16
6	90	\$41.99	\$8.00	\$23.50	\$0.00	\$73.49

Notes:

** Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:**

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 1	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

LABORER LABORERS - ZONE 1	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER - Zone 1

Effective Date - 06/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$23.79	\$7.85	\$15.35	\$0.00	\$46.99
2	70	\$27.76	\$7.85	\$15.35	\$0.00	\$50.96
3	80	\$31.72	\$7.85	\$15.35	\$0.00	\$54.92
4	90	\$35.69	\$7.85	\$15.35	\$0.00	\$58.89

Effective Date - 12/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$24.39	\$7.85	\$15.35	\$0.00	\$47.59
2	70	\$28.46	\$7.85	\$15.35	\$0.00	\$51.66
3	80	\$32.52	\$7.85	\$15.35	\$0.00	\$55.72
4	90	\$36.59	\$7.85	\$15.35	\$0.00	\$59.79

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER LABORERS - ZONE 1	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER LABORERS - ZONE 1	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85

For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS - ZONE 1	06/01/2019	\$39.80	\$7.85	\$15.35	\$0.00	\$63.00
	12/01/2019	\$40.80	\$7.85	\$15.35	\$0.00	\$64.00

For apprentice rates see "Apprentice- LABORER"

LABORER: MASON TENDER LABORERS - ZONE 1	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 1</i>	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 1</i>	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85
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>	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2019	\$40.91	\$10.75	\$18.97	\$0.00	\$70.63
	08/01/2019	\$41.99	\$10.75	\$19.11	\$0.00	\$71.85
	02/01/2020	\$42.50	\$10.75	\$19.11	\$0.00	\$72.36
	08/01/2020	\$43.58	\$10.75	\$19.26	\$0.00	\$73.59
	02/01/2021	\$44.09	\$10.75	\$19.26	\$0.00	\$74.10
	08/01/2021	\$45.21	\$10.75	\$19.42	\$0.00	\$75.38
	02/01/2022	\$45.68	\$10.75	\$19.42	\$0.00	\$75.85

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.46	\$10.75	\$18.97	\$0.00	\$50.18
2	60	\$24.55	\$10.75	\$18.97	\$0.00	\$54.27
3	70	\$28.64	\$10.75	\$18.97	\$0.00	\$58.36
4	80	\$32.73	\$10.75	\$18.97	\$0.00	\$62.45
5	90	\$36.82	\$10.75	\$18.97	\$0.00	\$66.54

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.00	\$10.75	\$19.11	\$0.00	\$50.86
2	60	\$25.19	\$10.75	\$19.11	\$0.00	\$55.05
3	70	\$29.39	\$10.75	\$19.11	\$0.00	\$59.25
4	80	\$33.59	\$10.75	\$19.11	\$0.00	\$63.45
5	90	\$37.79	\$10.75	\$19.11	\$0.00	\$67.65

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS, TILELAYERS & TERRAZZO MECH	02/01/2019	\$53.57	\$10.75	\$20.66	\$0.00	\$84.98
BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2019	\$54.92	\$10.75	\$20.80	\$0.00	\$86.47
	02/01/2020	\$55.55	\$10.75	\$20.80	\$0.00	\$87.10
	08/01/2020	\$56.90	\$10.75	\$20.95	\$0.00	\$88.60
	02/01/2021	\$57.54	\$10.75	\$20.95	\$0.00	\$89.24
	08/01/2021	\$58.94	\$10.75	\$21.11	\$0.00	\$90.80
	02/01/2022	\$59.51	\$10.75	\$21.11	\$0.00	\$91.37

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.79	\$10.75	\$20.66	\$0.00	\$58.20
2	60	\$32.14	\$10.75	\$20.66	\$0.00	\$63.55
3	70	\$37.50	\$10.75	\$20.66	\$0.00	\$68.91
4	80	\$42.86	\$10.75	\$20.66	\$0.00	\$74.27
5	90	\$48.21	\$10.75	\$20.66	\$0.00	\$79.62

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.46	\$10.75	\$20.80	\$0.00	\$59.01
2	60	\$32.95	\$10.75	\$20.80	\$0.00	\$64.50
3	70	\$38.44	\$10.75	\$20.80	\$0.00	\$69.99
4	80	\$43.94	\$10.75	\$20.80	\$0.00	\$75.49
5	90	\$49.43	\$10.75	\$20.80	\$0.00	\$80.98

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$47.69	\$12.00	\$15.60	\$0.00	\$75.29
	12/01/2019	\$48.83	\$12.00	\$15.60	\$0.00	\$76.43
	06/01/2020	\$49.91	\$12.00	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.05	\$12.00	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.14	\$12.00	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.28	\$12.00	\$15.60	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$47.69	\$12.00	\$15.60	\$0.00	\$75.29
	12/01/2019	\$48.83	\$12.00	\$15.60	\$0.00	\$76.43
	06/01/2020	\$49.91	\$12.00	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.05	\$12.00	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.14	\$12.00	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.28	\$12.00	\$15.60	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 1) <i>MILLWRIGHTS LOCAL 1121 - Zone 1</i>	04/01/2019	\$42.22	\$9.90	\$18.50	\$0.00	\$70.62
---	------------	---------	--------	---------	--------	---------

Apprentice - MILLWRIGHT - Local 1121 Zone 1

Effective Date - 04/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$23.22	\$9.90	\$5.31	\$0.00	\$38.43
2	65	\$27.44	\$9.90	\$15.13	\$0.00	\$52.47
3	75	\$31.67	\$9.90	\$16.10	\$0.00	\$57.67
4	85	\$35.89	\$9.90	\$17.06	\$0.00	\$62.85

Notes:

Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER <i>LABORERS - ZONE 1</i>	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES,GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$23.11	\$12.00	\$15.60	\$0.00	\$50.71
	12/01/2019	\$23.68	\$12.00	\$15.60	\$0.00	\$51.28
	06/01/2020	\$24.23	\$12.00	\$15.60	\$0.00	\$51.83
	12/01/2020	\$24.80	\$12.00	\$15.60	\$0.00	\$52.40
	06/01/2021	\$25.35	\$12.00	\$15.60	\$0.00	\$52.95
	12/01/2021	\$25.93	\$12.00	\$15.60	\$0.00	\$53.53

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$27.57	\$12.00	\$15.60	\$0.00	\$55.17
	12/01/2019	\$28.24	\$12.00	\$15.60	\$0.00	\$55.84
	06/01/2020	\$28.89	\$12.00	\$15.60	\$0.00	\$56.49
	12/01/2020	\$29.57	\$12.00	\$15.60	\$0.00	\$57.17
	06/01/2021	\$30.21	\$12.00	\$15.60	\$0.00	\$57.81
	12/01/2021	\$30.89	\$12.00	\$15.60	\$0.00	\$58.49

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$47.69	\$12.00	\$15.60	\$0.00	\$75.29
	12/01/2019	\$48.83	\$12.00	\$15.60	\$0.00	\$76.43
	06/01/2020	\$49.91	\$12.00	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.05	\$12.00	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.14	\$12.00	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.28	\$12.00	\$15.60	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 1</i>	01/01/2019	\$50.36	\$8.15	\$20.85	\$0.00	\$79.36
	07/01/2019	\$50.66	\$8.20	\$21.45	\$0.00	\$80.31
	01/01/2020	\$50.96	\$8.20	\$22.10	\$0.00	\$81.26
	07/01/2020	\$52.06	\$8.20	\$22.10	\$0.00	\$82.36
	01/01/2021	\$53.16	\$8.20	\$22.10	\$0.00	\$83.46

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.18	\$8.15	\$0.00	\$0.00	\$33.33
2	55	\$27.70	\$8.15	\$5.64	\$0.00	\$41.49
3	60	\$30.22	\$8.15	\$6.15	\$0.00	\$44.52
4	65	\$32.73	\$8.15	\$6.66	\$0.00	\$47.54
5	70	\$35.25	\$8.15	\$17.78	\$0.00	\$61.18
6	75	\$37.77	\$8.15	\$18.29	\$0.00	\$64.21
7	80	\$40.29	\$8.15	\$18.80	\$0.00	\$67.24
8	90	\$45.32	\$8.15	\$19.83	\$0.00	\$73.30

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.33	\$8.20	\$0.00	\$0.00	\$33.53
2	55	\$27.86	\$8.20	\$5.78	\$0.00	\$41.84
3	60	\$30.40	\$8.20	\$6.30	\$0.00	\$44.90
4	65	\$32.93	\$8.20	\$6.83	\$0.00	\$47.96
5	70	\$35.46	\$8.20	\$18.30	\$0.00	\$61.96
6	75	\$38.00	\$8.20	\$18.83	\$0.00	\$65.03
7	80	\$40.53	\$8.20	\$19.35	\$0.00	\$68.08
8	90	\$45.59	\$8.20	\$20.40	\$0.00	\$74.19

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SIGN, PICTORIAL & DISPLAY) PAINTERS LOCAL 35 - ZONE 1	06/01/2013	\$25.81	\$7.07	\$7.05	\$0.00	\$39.93
---	------------	---------	--------	--------	--------	---------

Apprentice - PAINTER SIGN - 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

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2019	\$47.05	\$8.15	\$20.85	\$0.00	\$76.05
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 1	07/01/2019	\$47.35	\$8.20	\$21.45	\$0.00	\$77.00
	01/01/2020	\$47.65	\$8.20	\$22.10	\$0.00	\$77.95
	07/01/2020	\$48.75	\$8.20	\$22.10	\$0.00	\$79.05
	01/01/2021	\$49.85	\$8.20	\$22.10	\$0.00	\$80.15

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

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.53	\$8.15	\$0.00	\$0.00	\$31.68
2	55	\$25.88	\$8.15	\$5.64	\$0.00	\$39.67
3	60	\$28.23	\$8.15	\$6.15	\$0.00	\$42.53
4	65	\$30.58	\$8.15	\$6.66	\$0.00	\$45.39
5	70	\$32.94	\$8.15	\$17.78	\$0.00	\$58.87
6	75	\$35.29	\$8.15	\$18.29	\$0.00	\$61.73
7	80	\$37.64	\$8.15	\$18.80	\$0.00	\$64.59
8	90	\$42.35	\$8.15	\$19.83	\$0.00	\$70.33

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.68	\$8.20	\$0.00	\$0.00	\$31.88
2	55	\$26.04	\$8.20	\$5.78	\$0.00	\$40.02
3	60	\$28.41	\$8.20	\$6.30	\$0.00	\$42.91
4	65	\$30.78	\$8.20	\$6.83	\$0.00	\$45.81
5	70	\$33.15	\$8.20	\$18.30	\$0.00	\$59.65
6	75	\$35.51	\$8.20	\$19.18	\$0.00	\$62.89
7	80	\$37.88	\$8.20	\$19.70	\$0.00	\$65.78
8	90	\$42.62	\$8.20	\$20.75	\$0.00	\$71.57

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2019	\$45.11	\$8.15	\$20.85	\$0.00	\$74.11
PAINTERS LOCAL 35 - ZONE 1	07/01/2019	\$45.41	\$8.20	\$21.45	\$0.00	\$75.06
	01/01/2020	\$45.71	\$8.20	\$22.10	\$0.00	\$76.01
	07/01/2020	\$46.81	\$8.20	\$22.10	\$0.00	\$77.11
	01/01/2021	\$47.91	\$8.20	\$22.10	\$0.00	\$78.21

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.56	\$8.15	\$0.00	\$0.00	\$30.71
2	55	\$24.81	\$8.15	\$5.64	\$0.00	\$38.60
3	60	\$27.07	\$8.15	\$6.15	\$0.00	\$41.37
4	65	\$29.32	\$8.15	\$6.66	\$0.00	\$44.13
5	70	\$31.58	\$8.15	\$17.78	\$0.00	\$57.51
6	75	\$33.83	\$8.15	\$18.29	\$0.00	\$60.27
7	80	\$36.09	\$8.15	\$18.80	\$0.00	\$63.04
8	90	\$40.60	\$8.15	\$19.83	\$0.00	\$68.58

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.71	\$8.20	\$0.00	\$0.00	\$30.91
2	55	\$24.98	\$8.20	\$5.78	\$0.00	\$38.96
3	60	\$27.25	\$8.20	\$6.30	\$0.00	\$41.75
4	65	\$29.52	\$8.20	\$6.83	\$0.00	\$44.55
5	70	\$31.79	\$8.20	\$18.30	\$0.00	\$58.29
6	75	\$34.06	\$8.20	\$18.83	\$0.00	\$61.09
7	80	\$36.33	\$8.20	\$19.35	\$0.00	\$63.88
8	90	\$40.87	\$8.20	\$20.40	\$0.00	\$69.47

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (TRAFFIC MARKINGS) LABORERS - ZONE 1	06/01/2019	\$39.65	\$7.85	\$15.35	\$0.00	\$62.85
	12/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
	06/01/2020	\$41.64	\$7.85	\$15.35	\$0.00	\$64.84
	12/01/2020	\$42.62	\$7.85	\$15.35	\$0.00	\$65.82
	06/01/2021	\$43.64	\$7.85	\$15.35	\$0.00	\$66.84
	12/01/2021	\$44.65	\$7.85	\$15.35	\$0.00	\$67.85

For Apprentice rates see "Apprentice- LABORER"

PAINTER / TAPER (BRUSH, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 1	01/01/2019	\$45.65	\$8.15	\$20.85	\$0.00	\$74.65
	07/01/2019	\$45.95	\$8.20	\$21.45	\$0.00	\$75.60
	01/01/2020	\$46.25	\$8.20	\$22.10	\$0.00	\$76.55
	07/01/2020	\$47.35	\$8.20	\$22.10	\$0.00	\$77.65
	01/01/2021	\$48.45	\$8.20	\$22.10	\$0.00	\$78.75

Apprentice - PAINTER - Local 35 Zone 1 - BRUSH NEW

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.83	\$8.15	\$0.00	\$0.00	\$30.98
2	55	\$25.11	\$8.15	\$5.64	\$0.00	\$38.90
3	60	\$27.39	\$8.15	\$6.15	\$0.00	\$41.69
4	65	\$29.67	\$8.15	\$6.66	\$0.00	\$44.48
5	70	\$31.96	\$8.15	\$17.78	\$0.00	\$57.89
6	75	\$34.24	\$8.15	\$18.29	\$0.00	\$60.68
7	80	\$36.52	\$8.15	\$18.80	\$0.00	\$63.47
8	90	\$41.09	\$8.15	\$19.83	\$0.00	\$69.07

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.98	\$8.20	\$0.00	\$0.00	\$31.18
2	55	\$25.27	\$8.20	\$5.78	\$0.00	\$39.25
3	60	\$27.57	\$8.20	\$6.30	\$0.00	\$42.07
4	65	\$29.87	\$8.20	\$6.83	\$0.00	\$44.90
5	70	\$32.17	\$8.20	\$18.30	\$0.00	\$58.67
6	75	\$34.46	\$8.20	\$18.83	\$0.00	\$61.49
7	80	\$36.76	\$8.20	\$19.35	\$0.00	\$64.31
8	90	\$41.36	\$8.20	\$20.40	\$0.00	\$69.96

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)	01/01/2019	\$43.71	\$8.15	\$20.85	\$0.00	\$72.71
PAINTERS LOCAL 35 - ZONE 1	07/01/2019	\$44.01	\$8.20	\$21.45	\$0.00	\$73.66
	01/01/2020	\$44.31	\$8.20	\$22.10	\$0.00	\$74.61
	07/01/2020	\$45.41	\$8.20	\$22.10	\$0.00	\$75.71
	01/01/2021	\$46.51	\$8.20	\$22.10	\$0.00	\$76.81

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 1 - BRUSH REPAINT

Effective Date - 01/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.86	\$8.15	\$0.00	\$0.00	\$30.01
2	55	\$24.04	\$8.15	\$5.64	\$0.00	\$37.83
3	60	\$26.23	\$8.15	\$6.15	\$0.00	\$40.53
4	65	\$28.41	\$8.15	\$6.66	\$0.00	\$43.22
5	70	\$30.60	\$8.15	\$17.78	\$0.00	\$56.53
6	75	\$32.78	\$8.15	\$18.29	\$0.00	\$59.22
7	80	\$34.97	\$8.15	\$18.80	\$0.00	\$61.92
8	90	\$39.34	\$8.15	\$19.83	\$0.00	\$67.32

Effective Date - 07/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.01	\$8.20	\$0.00	\$0.00	\$30.21
2	55	\$24.21	\$8.20	\$5.78	\$0.00	\$38.19
3	60	\$26.41	\$8.20	\$6.30	\$0.00	\$40.91
4	65	\$28.61	\$8.20	\$6.83	\$0.00	\$43.64
5	70	\$30.81	\$8.20	\$18.30	\$0.00	\$57.31
6	75	\$33.01	\$8.20	\$18.83	\$0.00	\$60.04
7	80	\$35.21	\$8.20	\$19.35	\$0.00	\$62.76
8	90	\$39.61	\$8.20	\$20.40	\$0.00	\$68.21

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PANEL & PICKUP TRUCKS DRIVER <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	06/01/2019	\$35.18	\$11.91	\$12.70	\$0.00	\$59.79
	08/01/2019	\$35.18	\$12.41	\$12.70	\$0.00	\$60.29
	12/01/2019	\$35.18	\$12.41	\$13.72	\$0.00	\$61.31
	06/01/2020	\$36.08	\$12.41	\$13.72	\$0.00	\$62.21
	08/01/2020	\$36.08	\$12.91	\$13.72	\$0.00	\$62.71
	12/01/2020	\$36.08	\$12.91	\$14.82	\$0.00	\$63.81
	06/01/2021	\$36.88	\$12.91	\$14.82	\$0.00	\$64.61
	08/01/2021	\$36.88	\$13.41	\$14.82	\$0.00	\$65.11
	12/01/2021	\$36.88	\$13.41	\$16.01	\$0.00	\$66.30
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$46.57	\$9.90	\$21.15	\$0.00	\$77.62
<i>For apprentice rates see "Apprentice- PILE DRIVER"</i>	08/01/2019	\$48.94	\$9.90	\$21.15	\$0.00	\$79.99
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2018	\$46.57	\$9.90	\$21.15	\$0.00	\$77.62
	08/01/2019	\$48.94	\$9.90	\$21.15	\$0.00	\$79.99

Apprentice - PILE DRIVER - Local 56 Zone 1

Effective Date - 08/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.29	\$9.90	\$21.15	\$0.00	\$54.34
2	60	\$27.94	\$9.90	\$21.15	\$0.00	\$58.99
3	70	\$32.60	\$9.90	\$21.15	\$0.00	\$63.65
4	75	\$34.93	\$9.90	\$21.15	\$0.00	\$65.98
5	80	\$37.26	\$9.90	\$21.15	\$0.00	\$68.31
6	80	\$37.26	\$9.90	\$21.15	\$0.00	\$68.31
7	90	\$41.91	\$9.90	\$21.15	\$0.00	\$72.96
8	90	\$41.91	\$9.90	\$21.15	\$0.00	\$72.96

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.47	\$9.90	\$21.15	\$0.00	\$55.52
2	60	\$29.36	\$9.90	\$21.15	\$0.00	\$60.41
3	70	\$34.26	\$9.90	\$21.15	\$0.00	\$65.31
4	75	\$36.71	\$9.90	\$21.15	\$0.00	\$67.76
5	80	\$39.15	\$9.90	\$21.15	\$0.00	\$70.20
6	80	\$39.15	\$9.90	\$21.15	\$0.00	\$70.20
7	90	\$44.05	\$9.90	\$21.15	\$0.00	\$75.10
8	90	\$44.05	\$9.90	\$21.15	\$0.00	\$75.10

Notes:

Apprentice to Journeyworker Ratio:1:5

PIPEFITTER & STEAMFITTER	03/01/2019	\$53.19	\$10.95	\$19.74	\$0.00	\$83.88
PIPEFITTERS LOCAL 537	09/01/2019	\$54.69	\$10.95	\$19.74	\$0.00	\$85.38
	03/01/2020	\$56.19	\$10.95	\$19.74	\$0.00	\$86.88
	09/01/2020	\$57.69	\$10.95	\$19.74	\$0.00	\$88.38
	03/01/2021	\$59.19	\$10.95	\$19.74	\$0.00	\$89.88

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PIPEFITTER - Local 537

Effective Date - 03/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$21.28	\$10.95	\$8.00	\$0.00	\$40.23
2	45	\$23.94	\$10.95	\$19.74	\$0.00	\$54.63
3	60	\$31.91	\$10.95	\$19.74	\$0.00	\$62.60
4	70	\$37.23	\$10.95	\$19.74	\$0.00	\$67.92
5	80	\$42.55	\$10.95	\$19.74	\$0.00	\$73.24

Effective Date - 09/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$21.88	\$10.95	\$8.00	\$0.00	\$40.83
2	45	\$24.61	\$10.95	\$19.74	\$0.00	\$55.30
3	60	\$32.81	\$10.95	\$19.74	\$0.00	\$63.50
4	70	\$38.28	\$10.95	\$19.74	\$0.00	\$68.97
5	80	\$43.75	\$10.95	\$19.74	\$0.00	\$74.44

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:**

PIPELAYER	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
LABORERS - ZONE 1	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

PLUMBERS & GASFITTERS	03/01/2019	\$56.69	\$11.82	\$16.51	\$0.00	\$85.02
PLUMBERS & GASFITTERS LOCAL 12	09/01/2019	\$58.19	\$11.82	\$16.51	\$0.00	\$86.52
	03/01/2020	\$59.69	\$11.82	\$16.51	\$0.00	\$88.02
	09/01/2020	\$61.19	\$11.82	\$16.51	\$0.00	\$89.52
	03/01/2021	\$62.69	\$11.82	\$16.51	\$0.00	\$91.02

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PLUMBER/GASFITTER - Local 12

Effective Date - 03/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$19.84	\$11.82	\$5.98	\$0.00	\$37.64
2	40	\$22.68	\$11.82	\$6.79	\$0.00	\$41.29
3	55	\$31.18	\$11.82	\$9.25	\$0.00	\$52.25
4	65	\$36.85	\$11.82	\$10.85	\$0.00	\$59.52
5	75	\$42.52	\$11.82	\$12.50	\$0.00	\$66.84

Effective Date - 09/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$20.37	\$11.82	\$5.98	\$0.00	\$38.17
2	40	\$23.28	\$11.82	\$6.79	\$0.00	\$41.89
3	55	\$32.00	\$11.82	\$9.25	\$0.00	\$53.07
4	65	\$37.82	\$11.82	\$10.85	\$0.00	\$60.49
5	75	\$43.64	\$11.82	\$12.50	\$0.00	\$67.96

Notes:

** 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr
Step4 with lic\$63.17, Step5 with lic\$70.47

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.)	03/01/2019	\$53.19	\$10.95	\$19.74	\$0.00	\$83.88
PIPEFITTERS LOCAL 537	09/01/2019	\$54.69	\$10.95	\$19.74	\$0.00	\$85.38
	03/01/2020	\$56.19	\$10.95	\$19.74	\$0.00	\$86.88
	09/01/2020	\$57.69	\$10.95	\$19.74	\$0.00	\$88.38
	03/01/2021	\$59.17	\$10.95	\$19.74	\$0.00	\$89.86

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

PNEUMATIC DRILL/TOOL OPERATOR	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
LABORERS - ZONE 1	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10

For apprentice rates see "Apprentice- LABORER"

POWDERMAN & BLASTER	06/01/2019	\$40.65	\$7.85	\$15.35	\$0.00	\$63.85
LABORERS - ZONE 1	12/01/2019	\$41.65	\$7.85	\$15.35	\$0.00	\$64.85
	06/01/2020	\$42.64	\$7.85	\$15.35	\$0.00	\$65.84
	12/01/2020	\$43.62	\$7.85	\$15.35	\$0.00	\$66.82
	06/01/2021	\$44.64	\$7.85	\$15.35	\$0.00	\$67.84
	12/01/2021	\$45.65	\$7.85	\$15.35	\$0.00	\$68.85

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$48.18	\$12.00	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.33	\$12.00	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.43	\$12.00	\$15.60	\$0.00	\$78.03
	12/01/2020	\$51.58	\$12.00	\$15.60	\$0.00	\$79.18
	06/01/2021	\$52.68	\$12.00	\$15.60	\$0.00	\$80.28
	12/01/2021	\$53.83	\$12.00	\$15.60	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$48.18	\$12.00	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.33	\$12.00	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.43	\$12.00	\$15.60	\$0.00	\$78.03
	12/01/2020	\$51.58	\$12.00	\$15.60	\$0.00	\$79.18
	06/01/2021	\$52.68	\$12.00	\$15.60	\$0.00	\$80.28
	12/01/2021	\$53.83	\$12.00	\$15.60	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$32.28	\$12.00	\$15.60	\$0.00	\$59.88
	12/01/2019	\$33.07	\$12.00	\$15.60	\$0.00	\$60.67
	06/01/2020	\$33.82	\$12.00	\$15.60	\$0.00	\$61.42
	12/01/2020	\$34.60	\$12.00	\$15.60	\$0.00	\$62.20
	06/01/2021	\$35.35	\$12.00	\$15.60	\$0.00	\$62.95
	12/01/2021	\$36.14	\$12.00	\$15.60	\$0.00	\$63.74
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY MIX CONCRETE DRIVERS after 4/30/10 (Drivers Hired After 4/30/2010) <i>TEAMSTERS LOCAL 25a</i>	07/01/2017	\$28.18	\$8.48	\$9.72	\$0.00	\$46.38
READY-MIX CONCRETE DRIVER <i>TEAMSTERS LOCAL 25a</i>	07/01/2017	\$31.44	\$8.48	\$9.72	\$0.00	\$49.64
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$47.69	\$12.00	\$15.60	\$0.00	\$75.29
	12/01/2019	\$48.83	\$12.00	\$15.60	\$0.00	\$76.43
	06/01/2020	\$49.91	\$12.00	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.05	\$12.00	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.14	\$12.00	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.28	\$12.00	\$15.60	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 1</i>	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$47.69	\$12.00	\$15.60	\$0.00	\$75.29
	12/01/2019	\$48.83	\$12.00	\$15.60	\$0.00	\$76.43
	06/01/2020	\$49.91	\$12.00	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.05	\$12.00	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.14	\$12.00	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.28	\$12.00	\$15.60	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ROOFER (Inc.Roofing Waterproofing &Roofing Damproofing) ROOFERS LOCAL 33	02/01/2019	\$43.36	\$11.50	\$15.90	\$0.00	\$70.76

Apprentice - ROOFER - Local 33

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.68	\$11.50	\$3.69	\$0.00	\$36.87
2	60	\$26.02	\$11.50	\$15.90	\$0.00	\$53.42
3	65	\$28.18	\$11.50	\$15.90	\$0.00	\$55.58
4	75	\$32.52	\$11.50	\$15.90	\$0.00	\$59.92
5	85	\$36.86	\$11.50	\$15.90	\$0.00	\$64.26

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.
 (Hot Pitch Mechanics' receive \$1.00 hr. above ROOFER)

Apprentice to Journeyworker Ratio:**

ROOFER SLATE / TILE / PRECAST CONCRETE ROOFERS LOCAL 33	02/01/2019	\$43.61	\$11.50	\$15.90	\$0.00	\$71.01
--	------------	---------	---------	---------	--------	---------

For apprentice rates see "Apprentice- ROOFER"

SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 17 - A	02/01/2019	\$46.50	\$13.20	\$24.12	\$2.52	\$86.34
	08/01/2019	\$48.10	\$13.20	\$24.12	\$2.56	\$87.98
	02/01/2020	\$49.75	\$13.20	\$24.12	\$2.61	\$89.68
	08/01/2020	\$51.35	\$13.20	\$24.12	\$2.66	\$91.33
	02/01/2021	\$53.00	\$13.20	\$24.12	\$2.71	\$93.03
	08/01/2021	\$54.75	\$13.20	\$24.12	\$2.76	\$94.83
	02/01/2022	\$56.50	\$13.20	\$24.12	\$2.81	\$96.63

Apprentice - SHEET METAL WORKER - Local 17-A

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	42	\$19.53	\$13.20	\$5.89	\$0.00	\$38.62
2	42	\$19.53	\$13.20	\$5.89	\$0.00	\$38.62
3	47	\$21.86	\$13.20	\$11.13	\$1.39	\$47.58
4	47	\$21.86	\$13.20	\$11.13	\$1.39	\$47.58
5	52	\$24.18	\$13.20	\$12.08	\$1.48	\$50.94
6	52	\$24.18	\$13.20	\$12.33	\$1.49	\$51.20
7	60	\$27.90	\$13.20	\$13.70	\$1.64	\$56.44
8	65	\$30.23	\$13.20	\$14.65	\$1.74	\$59.82
9	75	\$34.88	\$13.20	\$16.56	\$1.94	\$66.58
10	85	\$39.53	\$13.20	\$17.96	\$2.12	\$72.81

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	42	\$20.20	\$13.20	\$5.89	\$0.00	\$39.29
2	42	\$20.20	\$13.20	\$5.89	\$0.00	\$39.29
3	47	\$22.61	\$13.20	\$11.13	\$1.41	\$48.35
4	47	\$22.61	\$13.20	\$11.13	\$1.41	\$48.35
5	52	\$25.01	\$13.20	\$12.08	\$1.51	\$51.80
6	52	\$25.01	\$13.20	\$12.33	\$1.52	\$52.06
7	60	\$28.86	\$13.20	\$13.70	\$1.67	\$57.43
8	65	\$31.27	\$13.20	\$14.65	\$1.77	\$60.89
9	75	\$36.08	\$13.20	\$16.56	\$1.98	\$67.82
10	85	\$40.89	\$13.20	\$17.96	\$2.16	\$74.21

Notes:
Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	06/01/2019	\$35.64	\$11.91	\$12.70	\$0.00	\$60.25
	08/01/2019	\$35.64	\$12.41	\$12.70	\$0.00	\$60.75
	12/01/2019	\$35.64	\$12.41	\$13.72	\$0.00	\$61.77
	06/01/2020	\$36.54	\$12.41	\$13.72	\$0.00	\$62.67
	08/01/2020	\$36.54	\$12.91	\$13.72	\$0.00	\$63.17
	12/01/2020	\$36.54	\$12.91	\$14.82	\$0.00	\$64.27
	06/01/2021	\$37.34	\$12.91	\$14.82	\$0.00	\$65.07
	08/01/2021	\$37.34	\$13.41	\$14.82	\$0.00	\$65.57
	12/01/2021	\$37.34	\$13.41	\$16.01	\$0.00	\$66.76

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	06/01/2019	\$35.93	\$11.91	\$12.70	\$0.00	\$60.54
	08/01/2019	\$35.93	\$12.41	\$12.70	\$0.00	\$61.04
	12/01/2019	\$35.93	\$12.41	\$13.72	\$0.00	\$62.06
	06/01/2020	\$36.83	\$12.41	\$13.72	\$0.00	\$62.96
	08/01/2020	\$36.83	\$12.91	\$13.72	\$0.00	\$63.46
	12/01/2020	\$36.83	\$12.91	\$14.82	\$0.00	\$64.56
	06/01/2021	\$37.63	\$12.91	\$14.82	\$0.00	\$65.36
	08/01/2021	\$37.63	\$13.41	\$14.82	\$0.00	\$65.86
	12/01/2021	\$37.63	\$13.41	\$16.01	\$0.00	\$67.05
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1</i>	03/01/2019	\$58.98	\$9.47	\$19.60	\$0.00	\$88.05
	10/01/2019	\$60.48	\$9.47	\$19.60	\$0.00	\$89.55
	03/01/2020	\$61.98	\$9.47	\$19.60	\$0.00	\$91.05
	10/01/2020	\$63.48	\$9.47	\$19.60	\$0.00	\$92.55
	03/01/2021	\$64.98	\$9.47	\$19.60	\$0.00	\$94.05

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 03/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$20.64	\$9.47	\$9.10	\$0.00	\$39.21
2	40	\$23.59	\$9.47	\$9.10	\$0.00	\$42.16
3	45	\$26.54	\$9.47	\$9.10	\$0.00	\$45.11
4	50	\$29.49	\$9.47	\$9.10	\$0.00	\$48.06
5	55	\$32.44	\$9.47	\$9.10	\$0.00	\$51.01
6	60	\$35.39	\$9.47	\$10.60	\$0.00	\$55.46
7	65	\$38.34	\$9.47	\$10.60	\$0.00	\$58.41
8	70	\$41.29	\$9.47	\$10.60	\$0.00	\$61.36
9	75	\$44.24	\$9.47	\$10.60	\$0.00	\$64.31
10	80	\$47.18	\$9.47	\$10.60	\$0.00	\$67.25

Effective Date - 10/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$21.17	\$9.47	\$9.10	\$0.00	\$39.74
2	40	\$24.19	\$9.47	\$9.10	\$0.00	\$42.76
3	45	\$27.22	\$9.47	\$9.10	\$0.00	\$45.79
4	50	\$30.24	\$9.47	\$9.10	\$0.00	\$48.81
5	55	\$33.26	\$9.47	\$9.10	\$0.00	\$51.83
6	60	\$36.29	\$9.47	\$10.60	\$0.00	\$56.36
7	65	\$39.31	\$9.47	\$10.60	\$0.00	\$59.38
8	70	\$42.34	\$9.47	\$10.60	\$0.00	\$62.41
9	75	\$45.36	\$9.47	\$10.60	\$0.00	\$65.43
10	80	\$48.38	\$9.47	\$10.60	\$0.00	\$68.45

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>	06/01/2019	\$47.69	\$12.00	\$15.60	\$0.00	\$75.29
	12/01/2019	\$48.83	\$12.00	\$15.60	\$0.00	\$76.43
	06/01/2020	\$49.91	\$12.00	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.05	\$12.00	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.14	\$12.00	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.28	\$12.00	\$15.60	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$47.69	\$12.00	\$15.60	\$0.00	\$75.29
	12/01/2019	\$48.83	\$12.00	\$15.60	\$0.00	\$76.43
	06/01/2020	\$49.91	\$12.00	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.05	\$12.00	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.14	\$12.00	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.28	\$12.00	\$15.60	\$0.00	\$80.88

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>	03/01/2019	\$38.33	\$13.00	\$16.82	\$0.00	\$68.15

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

Effective Date - 03/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$15.33	\$13.00	\$0.46	\$0.00	\$28.79
2	40	\$15.33	\$13.00	\$0.46	\$0.00	\$28.79
3	45	\$17.25	\$13.00	\$13.42	\$0.00	\$43.67
4	45	\$17.25	\$13.00	\$13.42	\$0.00	\$43.67
5	50	\$19.17	\$13.00	\$13.73	\$0.00	\$45.90
6	55	\$21.08	\$13.00	\$14.03	\$0.00	\$48.11
7	60	\$23.00	\$13.00	\$14.34	\$0.00	\$50.34
8	65	\$24.91	\$13.00	\$14.66	\$0.00	\$52.57
9	70	\$26.83	\$13.00	\$14.96	\$0.00	\$54.79
10	75	\$28.75	\$13.00	\$15.27	\$0.00	\$57.02

Notes:

Apprentice to Journeyworker Ratio:1:1

TERRAZZO FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2019	\$52.49	\$10.75	\$20.66	\$0.00	\$83.90
	08/01/2019	\$53.84	\$10.75	\$20.80	\$0.00	\$85.39
	02/01/2020	\$54.48	\$10.75	\$20.80	\$0.00	\$86.03
	08/01/2020	\$55.83	\$10.75	\$20.95	\$0.00	\$87.53
	02/01/2021	\$56.47	\$10.75	\$20.95	\$0.00	\$88.17
	08/01/2021	\$57.87	\$10.75	\$21.11	\$0.00	\$89.73
	02/01/2022	\$58.46	\$10.75	\$21.11	\$0.00	\$90.32

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.25	\$10.75	\$20.03	\$0.00	\$57.03
2	60	\$31.49	\$10.75	\$20.03	\$0.00	\$62.27
3	70	\$36.74	\$10.75	\$20.03	\$0.00	\$67.52
4	80	\$41.99	\$10.75	\$20.03	\$0.00	\$72.77
5	90	\$47.24	\$10.75	\$20.03	\$0.00	\$78.02

Effective Date - 08/01/2019

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.92	\$10.75	\$20.80	\$0.00	\$58.47
2	60	\$32.30	\$10.75	\$20.80	\$0.00	\$63.85
3	70	\$37.69	\$10.75	\$20.80	\$0.00	\$69.24
4	80	\$43.07	\$10.75	\$20.80	\$0.00	\$74.62
5	90	\$48.46	\$10.75	\$20.80	\$0.00	\$80.01

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2019	\$41.00	\$7.85	\$15.55	\$0.00	\$64.40
	12/01/2019	\$42.00	\$7.85	\$15.55	\$0.00	\$65.40
	06/01/2020	\$42.99	\$7.85	\$15.55	\$0.00	\$66.39
	12/01/2020	\$43.97	\$7.85	\$15.55	\$0.00	\$67.37
	06/01/2021	\$44.99	\$7.85	\$15.55	\$0.00	\$68.39
	12/01/2021	\$46.00	\$7.85	\$15.55	\$0.00	\$69.40

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2019	\$39.72	\$7.85	\$15.55	\$0.00	\$63.12
	12/01/2019	\$40.72	\$7.85	\$15.55	\$0.00	\$64.12
	06/01/2020	\$41.71	\$7.85	\$15.55	\$0.00	\$65.11
	12/01/2020	\$42.69	\$7.85	\$15.55	\$0.00	\$66.09
	06/01/2021	\$43.71	\$7.85	\$15.55	\$0.00	\$67.11
	12/01/2021	\$44.72	\$7.85	\$15.55	\$0.00	\$68.12

For apprentice rates see "Apprentice- LABORER"

TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2019	\$39.60	\$7.85	\$15.55	\$0.00	\$63.00
	12/01/2019	\$40.60	\$7.85	\$15.55	\$0.00	\$64.00
	06/01/2020	\$41.59	\$7.85	\$15.55	\$0.00	\$64.99
	12/01/2020	\$42.57	\$7.85	\$15.55	\$0.00	\$65.97
	06/01/2021	\$43.59	\$7.85	\$15.55	\$0.00	\$66.99
	12/01/2021	\$44.60	\$7.85	\$15.55	\$0.00	\$68.00

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$47.69	\$12.00	\$15.60	\$0.00	\$75.29
	12/01/2019	\$48.83	\$12.00	\$15.60	\$0.00	\$76.43
	06/01/2020	\$49.91	\$12.00	\$15.60	\$0.00	\$77.51
	12/01/2020	\$51.05	\$12.00	\$15.60	\$0.00	\$78.65
	06/01/2021	\$52.14	\$12.00	\$15.60	\$0.00	\$79.74
	12/01/2021	\$53.28	\$12.00	\$15.60	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	06/01/2019	\$36.22	\$11.91	\$12.70	\$0.00	\$60.83
	08/01/2019	\$36.22	\$12.41	\$12.70	\$0.00	\$61.33
	12/01/2019	\$36.22	\$12.41	\$13.72	\$0.00	\$62.35
	06/01/2020	\$37.12	\$12.41	\$13.72	\$0.00	\$63.25
	08/01/2020	\$37.12	\$12.91	\$13.72	\$0.00	\$63.75
	12/01/2020	\$37.12	\$12.91	\$14.82	\$0.00	\$64.85
	06/01/2021	\$37.92	\$12.91	\$14.82	\$0.00	\$65.65
	08/01/2021	\$37.92	\$13.41	\$14.82	\$0.00	\$66.15
12/01/2021	\$37.92	\$13.41	\$16.01	\$0.00	\$67.34	
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	06/01/2019	\$51.88	\$7.85	\$15.95	\$0.00	\$75.68
	12/01/2019	\$52.88	\$7.85	\$15.95	\$0.00	\$76.68
	06/01/2020	\$53.87	\$7.85	\$15.95	\$0.00	\$77.67
	12/01/2020	\$54.85	\$7.85	\$15.95	\$0.00	\$78.65
	06/01/2021	\$55.87	\$7.85	\$15.95	\$0.00	\$79.67
	12/01/2021	\$56.88	\$7.85	\$15.95	\$0.00	\$80.68
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	06/01/2019	\$53.88	\$7.85	\$15.95	\$0.00	\$77.68
	12/01/2019	\$54.88	\$7.85	\$15.95	\$0.00	\$78.68
	06/01/2020	\$55.87	\$7.85	\$15.95	\$0.00	\$79.67
	12/01/2020	\$56.85	\$7.85	\$15.95	\$0.00	\$80.65
	06/01/2021	\$57.87	\$7.85	\$15.95	\$0.00	\$81.67
	12/01/2021	\$58.88	\$7.85	\$15.95	\$0.00	\$82.68
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	06/01/2019	\$43.95	\$7.85	\$15.95	\$0.00	\$67.75
	12/01/2019	\$44.95	\$7.85	\$15.95	\$0.00	\$68.75
	06/01/2020	\$45.94	\$7.85	\$15.95	\$0.00	\$69.74
	12/01/2020	\$46.92	\$7.85	\$15.95	\$0.00	\$70.72
	06/01/2021	\$47.94	\$7.85	\$15.95	\$0.00	\$71.74
	12/01/2021	\$48.95	\$7.85	\$15.95	\$0.00	\$72.75
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	06/01/2019	\$45.95	\$7.85	\$15.95	\$0.00	\$69.75
	12/01/2019	\$46.95	\$7.85	\$15.95	\$0.00	\$70.75
	06/01/2020	\$47.94	\$7.85	\$15.95	\$0.00	\$71.74
	12/01/2020	\$48.92	\$7.85	\$15.95	\$0.00	\$72.72
	06/01/2021	\$49.94	\$7.85	\$15.95	\$0.00	\$73.74
	12/01/2021	\$50.95	\$7.85	\$15.95	\$0.00	\$74.75
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	06/01/2019	\$35.64	\$11.91	\$12.70	\$0.00	\$60.25
	08/01/2019	\$35.64	\$12.41	\$12.70	\$0.00	\$60.75
	12/01/2019	\$35.64	\$12.41	\$13.72	\$0.00	\$61.77
	06/01/2020	\$36.54	\$12.41	\$13.72	\$0.00	\$62.67
	08/01/2020	\$36.54	\$12.91	\$13.72	\$0.00	\$63.17
	12/01/2020	\$36.54	\$12.91	\$14.82	\$0.00	\$64.27
	06/01/2021	\$37.34	\$12.91	\$14.82	\$0.00	\$65.07
	08/01/2021	\$37.34	\$13.41	\$14.82	\$0.00	\$65.57
	12/01/2021	\$37.34	\$13.41	\$16.01	\$0.00	\$66.76
WAGON DRILL OPERATOR <i>LABORERS - ZONE 1</i>	06/01/2019	\$39.90	\$7.85	\$15.35	\$0.00	\$63.10
	12/01/2019	\$40.90	\$7.85	\$15.35	\$0.00	\$64.10
	06/01/2020	\$41.89	\$7.85	\$15.35	\$0.00	\$65.09
	12/01/2020	\$42.87	\$7.85	\$15.35	\$0.00	\$66.07
	06/01/2021	\$43.89	\$7.85	\$15.35	\$0.00	\$67.09
	12/01/2021	\$44.90	\$7.85	\$15.35	\$0.00	\$68.10
For apprentice rates see "Apprentice- LABORER"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2019	\$48.18	\$12.00	\$15.60	\$0.00	\$75.78
	12/01/2019	\$49.33	\$12.00	\$15.60	\$0.00	\$76.93
	06/01/2020	\$50.43	\$12.00	\$15.60	\$0.00	\$78.03
	12/01/2020	\$51.58	\$12.00	\$15.60	\$0.00	\$79.18
	06/01/2021	\$52.68	\$12.00	\$15.60	\$0.00	\$80.28
	12/01/2021	\$53.83	\$12.00	\$15.60	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS & GASFITTERS LOCAL 12</i>	03/01/2019	\$56.69	\$11.82	\$16.51	\$0.00	\$85.02
	09/01/2019	\$58.19	\$11.82	\$16.51	\$0.00	\$86.52
	03/01/2020	\$59.69	\$11.82	\$16.51	\$0.00	\$88.02
	09/01/2020	\$61.19	\$11.82	\$16.51	\$0.00	\$89.52
	03/01/2021	\$62.69	\$11.82	\$16.51	\$0.00	\$91.02
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
Outside Electrical - East						
CABLE TECHNICIAN (Power Zone) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$27.14	\$7.75	\$1.81	\$0.00	\$36.70
For apprentice rates see "Apprentice- LINEMAN"						
CABLEMAN (Underground Ducts & Cables) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$38.45	\$7.75	\$9.53	\$0.00	\$55.73
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN CDL <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$31.66	\$7.75	\$9.44	\$0.00	\$48.85
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$24.88	\$7.75	\$1.75	\$0.00	\$34.38
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class A CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$38.45	\$7.75	\$13.61	\$0.00	\$59.81
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class B CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$33.92	\$7.75	\$10.21	\$0.00	\$51.88
For apprentice rates see "Apprentice- LINEMAN"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$24.88	\$7.75	\$1.75	\$0.00	\$34.38
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN -Inexperienced (<2000 Hrs.) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$20.35	\$7.75	\$1.61	\$0.00	\$29.71
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	09/03/2017	\$45.23	\$7.75	\$16.61	\$0.00	\$69.59

Apprentice - LINEMAN (Outside Electrical) - East Local 104

Effective Date - 09/03/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$27.14	\$7.75	\$3.31	\$0.00	\$38.20
2	65	\$29.40	\$7.75	\$3.38	\$0.00	\$40.53
3	70	\$31.66	\$7.75	\$3.45	\$0.00	\$42.86
4	75	\$33.92	\$7.75	\$5.02	\$0.00	\$46.69
5	80	\$36.18	\$7.75	\$5.09	\$0.00	\$49.02
6	85	\$38.45	\$7.75	\$5.15	\$0.00	\$51.35
7	90	\$40.71	\$7.75	\$7.22	\$0.00	\$55.68

Notes:

Apprentice to Journeyworker Ratio:1:2

TELEDATA CABLE SPLICER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/04/2019	\$30.73	\$4.70	\$3.17	\$0.00	\$38.60
TELEDATA LINEMAN/EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77
TELEDATA WIREMAN/INSTALLER/TECHNICIAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77
TREE TRIMMER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	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>	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.

MASTER RECAPITULATION OF COSTS SUMMARY

INSTRUCTION TO BIDDERS	DATE SUBMITTED	Insert Date
<p>Enter data in the Shaded cells of each Workbook TAB below. Workbook TABS include: MASTER RECAP; LOBBY B200A</p> <p>Appendix 1 workbook MUST be completed and returned in Excel format. Responses which include only PDF and or other non-Excel format summaries shall be rejected and disqualified without review.</p> <p>Notify AV Consultant via email if you experience difficulty entering data within the workbook or observe errors in reconciling and validating amounts and cell values. Consultant email contact: dcoquilano@akfgroup.com</p> <p>Where indicated, equipment, material and or services furnished and or installed by others are shown for coordination purposes only. Refer to project plans and specifications for scope of work and coordination requirements.</p>		
AUDIO-VIDEO COMMUNICATIONS CONTRACTOR (AVC)		PRIMARY AVC CONTACT
Name of Firm		Contact Name
Street Address		Telephone
City		Mobile
State, Zip Code		Email Address

TECHNICAL SERVICES RATE SUMMARY	BASE RATE*	CTS CERTIFICATION	CERTIFICATION
Engineering	\$ -	Insert Certificate Holder Name	
Fabrication	\$ -		
Programming - Control	\$ -		
Programming - DSP	\$ -		
Installation and Integration	\$ -		
Commissioning and Certification	\$ -		
Training	\$ -		
Documentation	\$ -		
Project Management	\$ -		
Field Service - On-Site Response within 24 Hours	\$ -		
Field Service - On-Site Response within 4 Hours	\$ -		
Shop Service and Bench Repair	\$ -		

* BASE RATE = Base Hourly Rate - Normal Business Hours

MAINTENANCE AND SERVICE CONTRACT COST SUMMARY	Year 1	Year 2	Year 3	Year 4	Year 5
Scheduled Maintenance and Emergency Service - 4 Hour On-Site Response	Included within Base Contract	\$ -	\$ -	\$ -	\$ -
Extended Warranty - Equipment and Materials Cost-Plus Unit Price Mark-up - Fixed Percentage (%)	0.0%				

ESTIMATED COMPLETION DATE		
Based on the Estimated Contract Award Date specified below, provide an Estimated Completion Date for the work as specified.		
Estimated Contract Award Date	January 28, 2019	
Estimated Completion Date	Estimated Completion Date	

BASE CONTRACT SUMMARY							
Location	Equipment and Materials	Additional Items	Technical Services	General Administration	Freight	Sales Tax	Total Amount
Lobby B200A - Video Wall Display System	-	-	-	-	-	-	-

TOTAL CONTRACT SUMMARY



MASTER RECAPITULATION OF COSTS SUMMARY

Description	Total Amount
Base Contract	-
Maintenance and Service Contract - Warranty Coverage Period: 1-Year Included within Base Contract	-
Total Contract Amount	-

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

- A. Work of this Section shall conform to the requirements of all related Bunker Hill Community College (BHCC) contract documents.
- B. Provide materials, labor, equipment and services necessary to furnish, deliver and install all work of this Section, as shown on the drawings, as specified herein, and or as required by job conditions.

1.2 RELATED DOCUMENTS

- A. Drawings and all general provisions of the contract, including all General and Supplementary Conditions and Division 01 Specification Sections apply to the work within this Section.
- B. Specifications, in general, describe functionality, quality and characteristics of equipment, components and systems.
- C. Drawings, in general, are diagrammatic and intended to convey design intent, indicating sizes, locations, connections and methods of installation.
- D. Scaled and indicated dimensions are approximate and are provided for estimating purposes only.
 - 1. Before proceeding with work, the Contractor shall confirm, coordinate and field verify all dimensions and locations.
 - 2. The Contractor shall render and submit all installation mounting detail drawings as required and as defined within these specifications
- E. Coordinate all work with the Architect and General Contractor.
- F. Make adjustments to the work as may be necessary or requested in order to resolve physical space issues or conflicts, preserve aesthetics and clearances and or avoid architectural features, elements, openings, structural members and or the work of other trades.
- G. Typical details, where indicated, apply to each and every item of the project where such details are applicable.

1. Typical details are not repeated in full on the plans, and are diagrammatic only, with the intent that such details shall be incorporated in full, throughout the project as applicable.
- H. All drawings referred to herein are furnished with and become an integral part of this specification.
1. Drawings provided as a part of this specification shall not be used and or submitted as Shop Drawings by the Contractor.
 - a. The Contractor shall render and submit original shop drawings as provided for within these specifications.
- I. All bid responses must include a completed "AV Specifications - Appendix 1 Master Recapitulation of Costs Summary" workbook, in Excel format.
- A. Bids responses which do not include a completed "Appendix 1 Master Recapitulation of Costs Summary" workbook in Excel format will be disqualified and rejected without review.
- J. Examine all other sections of the project specifications and all other drawings for requirements which impact or affect work under this Section, whether or not such work is specifically defined within this Section.
- K. If any part of the specifications or drawings appear unclear or contradictory, consult Architect and or Consultant for direction, interpretation and or clarification.

1.3 QUALIFICATIONS

- A. The Contractor shall have a minimum of five (5) years verifiable and demonstrated experience in the installation, operation and maintenance of large-scale and complex Audio-Video Communications (AV) and related technology systems.
- B. The Contractor shall have a documented record of satisfactory performance, successfully completing projects and installations of similar size, scope and complexity.
- C. The Contractor shall provide a minimum of three (3) references, including contact name, title, e-mail address, telephone number and reference project summary.
 1. Reference projects shall be of similar scope, magnitude and complexity.
- D. The Contractor must be a Certified and or Authorized Dealer,

Reseller, Installer and Factory Authorized Service Center for all specified equipment, components, hardware and software.

1. Provide a complete list of all manufacturer certifications applicable to this project.

1.4 SCOPE OF WORK

A. The project includes the following work;

1. Lobby B200A Video Wall Display

a. Image Size: 165 in. Diagonal

- (1) Display Size: 55" Diagonal
- (2) Total Displays: 9
- (3) Configuration: 3 Columns Wide x 3 Rows High

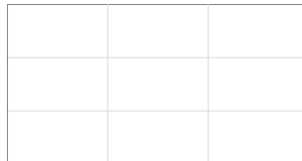
b. The installed system shall allow users to;

- (1) Display High Definition video content on a large format multi-display video wall.

a. Images shall be displayed based on the following standard Image Configuration Modes;

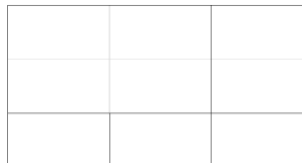
1. Mode 1

One (1) Source - One (1) Image



2. Mode 2

Five (5) Sources - Five (5) Images



3. Mode 3

Nine (9) Sources - Nine (9) Images

- b. Standard configuration video wall quad controllers and power supply modules shall be installed off-chassis within the Video Wall AV Equipment Rack.
- (2) Connect and present content via wireless (WiFi) AV Presentation Gateway.
 - (3) Capture and display Presenter video via ceiling-mounted High Definition video camera.
 - (4) Display up to seven (7) additional BHCC-furnished HDMI video sources which may include the following;
 - a. One (1) network PC with HDMI output installed within the Video Wall AV Equipment Rack which shall be dedicated to the BHCC RAVE Mobile Safety Mass Notification platform.
 - b. One (1) network PC with HDMI output installed within the Video Wall AV Equipment Rack which shall be dedicated to the BHCC Digital Signage platform.
 - 1. Digital Signage content shall be created off-line by BHCC utilizing Visix Axis TV.
 - 2. Content shall be archived and accessed via BHCC-managed cloud storage platform.
 - 3. Digital Signage content shall be created and developed based on the following image display specifications;
 - a. Aspect Ratio: 16:9
 - b. Format: Landscape and Portrait

- c. CATV subscription programming services content and one (1) CATV Tuner.
 - 1. CATV Tuner installed within Video Wall AV Equipment Rack.
- d. Connect and display up to four (4) additional HDMI sources, furnished by BHCC and installed within the Video Wall AV Equipment Rack.
 - 1. Sources shall be capable of displaying images in both Landscape and Portrait modes as required.
- f. Reproduce program audio via integrated ceiling speaker system.
- g. Reproduce program audio via recessed speakers installed within the front wall.
- h. Provide Presenter speech reinforcement via integrated two (2) channel wireless microphone system.
 - (1) Each wireless microphone channel shall include the following microphone types;
 - a. One (1) Lavalier-type clip-on microphone with belt-pack transmitter.
 - b. One (1) Hand Held microphone transmitter with Desk Stand and Floor Stand.
 - (2) Only one (1) microphone type can be used with each channel as follows;
 - a. Channel 1: Lavalier or Hand Held
 - b. Channel 2: Lavalier or Hand Held
- i. Capture audience audio via ceiling-mounted pendant style microphones.
- j. Reproduce program audio and speech reinforcement via wireless Assistive Listening System.
- k. Connect and reproduce an Auxiliary (AUX) Line Level audio input (source) via Rack Connection Panel.

- l. Provide two (2) Mic Level Audio Press Feeds (Output) via Rack Connection Panel.
 - m. Distribute video via network Video Encoder and Decoder.
 - n. Control Video Wall display configuration, source routing and program audio volume via wireless wall-mounted AV Control Touch Screen located within the AV Equipment Rack room.
 - (1) Control AV system via Apple and Android devices utilizing applications downloaded and managed by BHCC.
- E. The Contractor shall provide all equipment, materials, supplies, labor, and all other goods and services required to provide complete and fully functional systems, consistent with the design intent of these specifications.
- F. It is the sole responsibility of the Contractor to ensure that all systems are fabricated, assembled and installed complete, including all normal, customary and required miscellaneous parts, components, hardware, materials, cables, connectors, power supplies, PoE injectors, COM Ports, rack mount kits and any and all other supplies as may be necessary, but not specifically defined, or otherwise identified within these specifications.
- G. Under no circumstance or condition shall the Contractor be entitled to additional monies resulting from omissions and or errors in the submitted bid response, including for items which may be required but not specified.
- H. Prior to procurement, the Contractor shall review and verify all product specifications and manufacturer model and part numbers to ensure specified equipment and components meet the functional requirements defined within these specifications.
 1. The Contractor shall be solely responsible and bear the full cost for all restocking fees and other related costs due to procurement of incorrect equipment and or parts without prior validation and confirmation of suitability.
- I. In the event that specified equipment and or components are back-ordered and or otherwise unavailable in time to meet the project schedule, and or have been discontinued between the date of issuance of these specifications and the bid response date, the Contractor shall provide the manufacturer's specified current comparable and functionally equivalent alternate and or replacement model.

- J. Unless otherwise noted, all devices shall be located and or installed as shown on the AV Plan, Reflected Ceiling, Elevation and all other related plans and drawings and as coordinated with the architect.
- K. The Contractor shall coordinate and confirm the final locations, colors and finishes of all AV devices with the Architect and General Contractor, including, but not limited to connection plates, inserts and panels, Touch Screens, Table Boxes, speakers and microphones.
- L. The Contractor shall furnish all equipment, components, devices, software, hardware and materials, whether specifically defined, specified, stated, and or otherwise stipulated herein, or not, as required to provide complete and fully functional systems, operating in compliance with the design intent described within these specifications, and with all manufacturer specifications and warranty requirements.
- M. The Contractor shall verify, confirm and provide all equipment, components and materials, in such quantities as required to provide complete and fully functional systems, including but not limited to all required interconnection and miscellaneous cables, connectors, adapters, dongles, power supplies, COM ports, PoE injectors, fan assemblies, and rack shelves, blank, vent and security panels.
- N. The Contractor shall be solely responsible for the means and methods employed in the execution, implementation and delivery of the work specified herein.
- O. The Contractor shall be responsible for effective coordination of all elements of work related to these specifications including, but not limited to;
 - 1. All equipment and or components furnished by others and installed by the Contractor.
 - 2. All equipment and materials furnished by the Contractor and installed by others.
 - 3. All equipment and materials furnished and or installed by others and required to provide complete and fully functional systems, including equipment and materials, which are not in contract (NIC) and or are furnished by the Owner.
- P. The Contractor shall provide all equipment, components, hardware, material, labor, coordination, quality assurance and all other technical and administrative services as may be necessary for the complete, correct and timely installation of all systems and equipment as specified herein.

Q. No error or omission within these specifications, or within or on any other related construction documents or drawings, shall relieve the Contractor from the sole responsibility to provide the Owner with complete and fully functional systems as required to meet the design intent and operational capabilities specified herein.

1.5 CONTRACTOR SERVICES

A. The Contractor shall provide all normal and customary technical, administrative and other support services as required to ensure satisfactory performance and on-schedule delivery of the contracted work.

1. Contractor project resources shall include but are not limited to Engineering; CAD/Drafting; Programming; Fabrication; Installation; Certification, Training; Warranty Service; Procurement, Warehouse, Delivery and Logistics; and Project Management and Administration.

2. The Contractor shall staff the project with appropriately qualified and experienced resources including, but not limited to certified programmers and technicians as specified herein.

3. Project AV Control System Programmers shall hold valid Crestron Advanced Programming certification (CTI-P301).

4. Project technicians shall hold valid Crestron DM Technician (DMC-T) certification.

5. Project technicians shall hold current and valid AVIXA (InfoComm) Certified Technology Specialist (CTS) certification.

B. The Contractor shall staff the project with sufficient qualified manpower as required to meet and maintain the project schedule and to keep pace with the work of cooperative trades.

C. The Contractor shall submit documentation defining all costs and descriptions of all agreements and or services, provided by any and all subcontractors engaged by the Contractor, for the furnishing of any element(s) or portion(s) of the work described herein.

1. Each subcontractor shall be specifically identified and their roles, responsibilities and qualifications detailed within the Contractor's Bid Response.

2. All work performed by subcontractors engaged by the Contractor shall be considered as part of the Contractor's contracted

scope of work and the Contractor's sole, full, complete and direct responsibility.

- D. The Contractor shall assign a qualified Project Manager with demonstrated experience in the installation, supervision, management, coordination and successful completion of projects of comparable scope, magnitude and complexity.
 - 1. The Project Manager shall report to the Construction Manager.
 - 2. The Project Manager shall serve as the Contractor's single point of contact (SPOC) for all activities related to the work specified herein.
 - 3. The Project Manager shall be responsible for ensuring timely order placement, contract and change order documentation and negotiation, task scheduling and status reporting.
 - 4. The Project Manager shall attend construction and project meetings as required by the Construction Manager, throughout the duration of the project.
 - 5. The Project Manager shall provide the Construction Manager with written weekly status updates and progress reports.
- E. The Contractor shall provide a minimum of two (2) qualified CTS technicians, each of whom will have actively participated in the project and have a demonstrated knowledge and understanding of project scope, to conduct and perform all final system testing, calibration and adjustment, demonstration, diagnostic evaluation and or corrective action as required to ensure all equipment, components and systems conform to the project specifications.
- F. The Contractor shall exercise care and due diligence at all times and shall provide full and active cooperative participation during all phases of the project.
- G. The Contractor shall furnish all submittals in a timely manner and as otherwise specified herein.
- H. The Contractor shall render and submit original Shop Drawings, which shall include, but shall not be limited to;
 - 1. Schematic and Block diagrams detailing all system equipment placement and type, circuits and wiring, connections and terminations, pin-outs, color codes and cabling ID and numbering schemes.
 - 2. Installation and Mounting Details including, but not limited

to all equipment, component and device dimensioned location and installation details.

3. Elevation Detail drawings including, but not limited to dimensioned structural mounting, backing and blocking; equipment and mount detail, AV device and junction boxes, low voltage rings, conduit and cable paths.
4. Provide all electrical, data, CATV and other required low voltage wiring location and specifications details for coordination with related work performed by others.
5. Reflected Ceiling Plans as required.
6. Conduit Riser diagrams, including all conduit and box trade sizes and identification.
7. Furniture Integration Detail drawings for coordination with work performed by others.
 - a. Contractor shall provide dimensioned shop drawings for all AV components integrated within furniture and or millwork including, but not limited to display mounts, microphones, table boxes and equipment racks.
8. Rack and Equipment Enclosure Elevation drawings, including Rack Unit (RU) configuration, calculated power, thermal loads and management, cable management and ventilation "clear area" details and dimensions.
9. Detailed drawings and specifications for all architectural and aesthetic elements including, but not limited to, connection panels, microphones and table box dimensions, colors and finishes.
 - a. Coordinate final locations, colors and finishes with the Architect and General Contractor.
10. Complete and accurate Record Set (As Built) drawings, which shall be provided to the owner upon completion of the work.
11. Drawings provided as a part of this specification shall not be used and or submitted as Shop Drawings.
 - a. The Contractor shall render and submit original Shop Drawings and Submittals as required.
12. The Contractor shall be responsible for the initial and final calibration and adjustment of the systems as specified herein.

- a. The Contractor shall provide all necessary test equipment and accessories required to conduct and document system performance evaluations, demonstrations and acceptance testing as specified herein.
 - b. All test equipment shall be fully functional and shall have valid certificates of calibration as applicable.
13. The Contractor shall provide complete and comprehensive narrative and practical (hands-on) Training in the proper operation, use, care and maintenance of the specified equipment, components and systems, to the personnel designated by the Owner.
- a. Training shall be conducted by a suitably qualified instructor.
 - b. In the event Contractor does not have certified and qualified instructors on staff for specific equipment, components and or software, a manufacturer's representative for such instruction will be provided by the Contractor, at no additional cost to the Owner.
 - c. All training shall take place at the installed systems location(s), after acceptance.
 - d. The Contractor shall provide a minimum of four (4) hours of end-user training and two (2) hours of advanced technical training for each system included in this specification.
 - (1) Advanced training will include a comprehensive review of system specifications and diagrams and detailed instruction in the modes of operation, routine service and maintenance, diagnostic troubleshooting and reconfiguration of the systems.
 - e. The Contractor shall provide follow-up training within sixty (60) days of the completion of initial training, which shall be scheduled at the discretion and convenience of the owner.

1.6 WORK BY OTHERS

- A. Certain equipment, materials and or services will be provided by others and shall be fully coordinated by the Contractor.
- B. Unless otherwise indicated in these specifications or on the related

project drawings, equipment, materials and or services provided by others shall include but may not be limited to the following:

1. LAN and related network infrastructure, switches and ports, cabling, wall plates, table box inserts, connections and terminations.
 - a. Network services shall be installed and operational in adequate time so as to allow for the satisfactory installation and testing of AV equipment, components and systems.
2. Telephone jacks and special outlets, (Switched 56, ISDN, T1, Analog Line, etc.).
 - a. Special services shall be installed and operational in sufficient time so as to allow for the satisfactory installation and testing of AV equipment, components and systems.
3. CATV signal distribution including, but not limited to coaxial cable, amplifiers, splitters, taps, pads, wall plates, connectors and terminations as required.
4. AV conduit, raceway, cable tray, floor boxes and poke-thru devices, junction boxes and AV device and outlet boxes permanently installed within floors, walls and ceilings.
5. Room lighting fixtures, dimming systems, power receptacles and outlets, low voltage AV controllers and interfaces, and interconnecting wiring for these circuits.
 - a. The Contractor shall coordinate the implementation of AV control system integration with lighting control and dimming systems as provided for within the project specifications.
 - b. Lighting system low voltage interfaces required for the integration of AV control systems shall be furnished and installed by, and coordinated with the Lighting Contractor.
 - c. Lighting systems shall be installed and operational in sufficient time so as to allow for the satisfactory integration and testing of AV equipment, components and systems.
7. Motorized shade and drape systems as applicable.

- a. The Contractor shall coordinate the implementation of AV control system integration with motorized shade and drape systems as provided for within the project specifications.
 - b. Shade and Drape System Low Voltage interfaces required for the integration of AV control systems shall be furnished and installed by, and coordinated with the Shade and Drape Contractor.
 - c. Shade and drape systems shall be installed and operational in sufficient time so as to allow for the satisfactory integration and testing of AV equipment, components and systems.
8. Fire Alarm system integration and Emergency Shut-Down mode operation as applicable.
- a. The Contractor shall coordinate the implementation of AV control system integration with Fire Alarm systems as provided for within the project specifications and as required by the enforcing authority(ies), governing laws, codes, or standards.
 - b. Fire Alarm low voltage interfaces required for the integration of AV control systems shall be furnished and installed by, and coordinated with the Fire Alarm Contractor.
 - c. Fire Alarm systems shall be installed and operational in sufficient time so as to allow for the satisfactory integration and testing of AV equipment, components and systems.
9. RAVE Mobile Safety Mass Notification integration and Emergency mode operation as applicable.
- a. RAVE Mobile Safety Mass Notification low voltage interfaces required for the integration of AV control systems shall be furnished and installed by, and coordinated with the RAVE Mobile Safety Mass Notification system installation contractor and the Owner.
 - b. RAVE Mobile Safety Mass Notification system shall be installed and operational in sufficient time so as to allow for the satisfactory integration and testing of AV equipment, components and systems.
10. Electrical panels, circuit breakers, branch circuit wiring,

permanent (hard-wired) electrical connections and or all receptacles as required to provide electrical power for the specified systems and equipment.

- a. All electrical circuits serving integrated AV system components and equipment shall be common phase.
11. Structural and carpentry work, wall and ceiling openings, blocking, backing, railings, stairs, fire prevention and safety devices, rough and finished trim, painting and patching, drapes, carpets, floor coverings, computer floors, glazing, acoustical treatments, millwork and cabinetry, and heating, ventilation and air conditioning systems.
 12. Adequate air circulation, cooling, ventilation and exhaust for all AV equipment installation locations as required to ensure sufficient and effective thermal management and control.
 - a. The Contractor shall actively and effectively coordinate with the architect, general contractor, HVAC contractor, furniture and millwork vendors to ensure adequate means of air circulation, ventilation and exhaust are provided within all furniture, millwork, closets and other enclosures intended to contain audiovisual equipment.
 13. Moveable and fixed furniture including Tables, Credenzas, Instructor Workstations, Podiums, Lecterns, millwork, desks and chairs.
 - a. The Contractor shall furnish and install all Table Boxes, retractors, inserts and connection panels as specified.
 - (1) Furniture, millwork and other finish surfaces shall be cut and or modified by others as required to accommodate installation of specified equipment and or system components.
 - (2) The Contractor shall provide accurate dimensioned details, full-size scaled templates and or sample products for all required cutouts.
 - b. Furniture, including but not limited to tables, credenzas and millwork, shall be installed and all required modifications shall be complete in adequate time to allow for the satisfactory installation and testing of AV equipment, components and systems.
 14. Refer to project plans, specifications and construction documents for reference to items marked "Not in Contract" and

or "by Others" and effectively coordinate, confirm and verify work as required.

1.7 OWNER FURNISHED EQUIPMENT

A. The following equipment shall be furnished by the BHCC, and shall be installed and integrated by the Contractor;

1. Network PC and laptop computers, furnished and configured by the Owner.

a. Day One Implementation

(1) One (1) BHCC network PC with HDMI output dedicated to the RAVE Mobile Safety Mass Notification platform, installed within the Video Wall AV Equipment Rack.

(2) One (1) BHCC network PC with HDMI output dedicated to the Digital Signage platform, installed within the Video Wall AV Equipment Rack.

a. Digital Signage content shall be created off-line by BCHH and accessed via BHCC-managed cloud storage platform.

b. Digital Signage content shall be created and developed based on the following image display specifications;

1. Aspect Ratio: 16:9

2. Format: Landscape and Portrait

2. CATV subscription service programming content and Tuner.

a. Tuner shall be equipped with HDMI output.

b. Tuner shall be rack-mounted within the AV Equipment Rack.

3. Up to four (4) additional HDMI source devices.

B. The Contractor shall coordinate with the Owner to ensure that all Owner-Furnished equipment is installed and fully-functional in adequate time to allow for the satisfactory installation, integration and testing of the completed systems.

1.8 SUBSTITUTIONS, DEVIATIONS, AND CHANGES

A. Substitutions

1. Reference to products and manufacturers is intended to serve as the basis of design only and is not intended to exclude or limit other locally available, equivalent and acceptable products and or manufacturers, except as may be otherwise noted herein.
2. The burden of proof of equivalence shall be the sole and exclusive responsibility of the Contractor.
 - a. The Consultant and Owner shall provide the final determination as to equivalence, suitability and fitness for purpose.
3. All requests for substitution shall be made to the Construction Manager and must be accompanied by a Product Data Sheet and Shop Drawing submittal as outlined herein.
4. The Owner has no obligation to consider or approve requests for substitution after award of contract.

B. Deviations

1. Any deviation, alteration, modification or change resulting in a change in the performance specification, functional operation and or aesthetic specifications of a component, device or system; additional work; schedule impact; and or additional cost, are not permissible without prior review and written approval by the Owner or authorized representative.

C. Changes

1. All work described in Contract Documents shall follow the intent, methods, requirements and general arrangement of this specification unless otherwise noted.

1.9 SUBMITTALS

A. Pre-Construction

1. Product Data Sheets as specified herein.
2. Original Shop Drawings as specified herein.
3. Control System Programming submittals as specified herein.

B. During Construction

1. Pull Schedules as specified herein.
2. Progress Reports as specified herein.

C. Post Construction

1. Record Set (As Built) drawings as specified herein.
2. Updated Pull Schedules as specified herein.
3. Field Tests Reports as specified herein.

1.10 SUBMITTALS - GENERAL PROCEDURES

A. General

1. Do not commence work, which requires prior review and or approval of a submittal, until receipt of a returned submittal, annotated with appropriate direction and or approval.
2. Do not include requests for substitution within submittals.
3. Submittals, which deviate from the requirements, format and or procedures outlined herein, will be rejected in their entirety, without review.
4. No allowance or extension of time will be considered or allowed which results from delay and or lost time associated with process or procedural deviation by the Contractor.
5. All pricing and proposals for changes shall be submitted through the Construction Manager.
6. Proposals for changes shall be submitted complete and all-inclusive, detailing all items and related costs in accordance with the provisions of the Contract for changed work.

B. Preparation and Transmittal of Submittals

1. Sign or initial each copy of each submittal to acknowledge, confirm and certify compliance with the requirements of the Contract Documents.
2. Submittals shall be transmitted to the Construction Manager only.
 - a. The Construction Manager shall distribute submittals to the Owner, Architect, Consultant and other project

stakeholders as required for review and action.

3. Transmit each submittal with a Transmittal form.
 - a. Submittals received without a transmittal form will be rejected without review.

C. Review of Submittals

1. Electronic submittals transmitted via email and or FTP site will be reviewed, annotated with appropriate actions, and returned to the Contractor by the Construction Manager as follows;
 - a. Action: No Exception Taken

Work covered by the submittal may proceed, provided it complies with the requirements of the Contract Documents.
 - b. Action: Make Corrections Noted

Work covered by the submittal may proceed, provided it complies both with notations and corrections on the submittal and with requirements of the Contract Documents.
 - c. Action: Revise and Resubmit

Do not proceed with work covered by the submittal.

Revise the submittal, or prepare a new submittal, in accordance with notations and directions contained within the response.

Resubmit the revised submittal without delay.
 - d. Action: Rejected

This action is reserved for submittals, which are fundamentally non-compliant with the requirements of the Contract Documents.

Under these circumstances, the Consultant will not make detailed corrections or markings on the submittal.

Prepare a new submittal in accordance with the requirements of the Contract Documents.

Resubmit without delay.

1.11 PRODUCT DATA SHEETS

A. Product data sheet submittals shall consist of the following;

1. Cover Sheet
2. Project name and address
3. Number of submittal
4. Date of submittal
5. Name and address of the Contractor
6. Table of Contents and Index
 - a. Include page and item numbers of the corresponding specification section and/or drawing number(s) of the Contract Documents.
7. Product name and manufacturer
8. Manufacturers' technical specifications and data sheets of all items specified herein.
 - a. Submit only pertinent pages. Do not submit entire product catalogs.
 - b. Clearly identify the specific product being submitted using appropriate markings and arrows. Do not use highlighters or coloring which may not be reproducible by photocopy.
9. Identify any options and or accessories that are applicable to the project.
10. Confirm and verify all product quantities and manufacturer model and part numbers are current, correct and complete, including required accessories and or options.
11. Identify the installation location of each piece of equipment, including Room Number and or Room Name.
12. Identify special coordination requirements for the product.
13. Identify "long lead" procurement requirements for the specified product as may be applicable.

B. Preparation and Transmittal

1. Each submittal shall be in accordance with the procedures outlined herein.
2. Bind and package each submittal with Tabs and Table of Contents as appropriate.
3. Sheet size shall be 8-1/2" x 11"
4. Submit all product data sheet submittals for each system, subsystem, or unit of work as one submittal.
5. Submit four (4) copies to the Construction Manager.

1.12 SHOP DRAWINGS

A. The Contractor shall render and submit complete original Shop Drawings as specified within this Section.

1. Drawings issued as a part of this specification shall not be submitted as Shop Drawings.

B. Each shop drawing submittal rendered by the Contractor shall consist of the following;

1. Title Block
2. Project name and address
3. Number of submittal
4. Date of submittal
5. Name and address of the Contractor
6. Drawing scale
7. Diagrams showing evidence of compliance with Contract Documents and coordination with other trades.
8. Associated wiring diagrams of all equipment, with types and model numbers specified.
9. Fully dimensioned housing and mounting drawings, including information on finishes.
10. Specific notation of field measurements at accurate scale.

11. Identification of specific products and materials used.
12. Reference Room Numbers and or Room Names on all Shop Drawings.
13. Compliance with specified standards.
14. Dimensions at accurate scale.

D Preparation and Transmittal

1. Each submittal shall be in accordance with the procedures outlined herein and shall provide adequate space for action marking adjacent to the title block.
2. All sketches and drawings shall be issued by the Contractor using the following sheet sizes:
 - a. Sketches (SK): Sheet size shall be 8-1/2" x 11"
 - b. Drawings: Sheet size shall be 24" x 36"
3. Submit all shop drawing submittals for each system, subsystem, or unit of work as one complete submittal.
4. Submit four (4) copies to the Construction Manager.

1.13 PULL SCHEDULES

A. The pull schedule shall include, but is not limited to:

1. Cover Sheet
2. Project name and address
3. Number of Pull Schedule submittal
4. Date of Pull Schedule submittal
5. Name and address of the Contractor
6. Pull Schedule Data Field
 - a. Field 1: Sequential Cable Number
 - b. Field 2: Room Number (Location of Device)
 - c. Field 3: Audiovisual Cable ID
 - d. Field 4: Cable Type

- e. Field 5: Equipment Manufacturer and Model Number
- f. Field 6: Equipment Serial Number
- g. Field 7: Jack and or Connection Label as applicable
- h. Field 8: Rack Label as applicable

B. Preparation and Transmittal

- 1. The Pull Schedules will be computer-generated and submitted to the Consultant for review.
- 2. Submit four (4) copies to the Construction Manager.

C. Closeout

- 1. The Contractor shall submit a complete, updated drawing set and Pull Schedules accurately reflecting the completed work including all field changes, modifications and or revisions.
- 2. The Contractor shall individually bind and submit to the Consultant for review and approval, all Record Set (As Built) drawings, updated Pull Schedules, user guides and manuals, equipment lists with serial numbers, test results and a completed check out list, for each contracted system, prior to issuing closeout documentation to the Owner.

1.14 REPORTING

A. The Contractor shall submit weekly progress reports, which shall include, but shall not be limited to;

- 1. Installation Schedule risks, issues, conflicts and or delays.
- 2. Status of the installation, detailing all remaining tasks and proposed completion dates.
- 3. Percentage of completion of each activity.
- 4. Gantt chart format showing continuous vertical lines to identify the first working day of each week.
- 5. Illustration defining how the start of a given activity depends on completion of preceding activities, and how the completion of a given activity may restrain or constrain the start of subsequent activities.

6. Identification of the Critical Path.
7. Requests for receiving major equipment and material shipments.
8. Requests for subcontractor access to the job site.
9. Requests for utilities and or services disconnection and or connection.
10. Delays and stoppages.
 - a. Note that delays and or stoppages shall not affect the scheduled completion date, unless approved in writing by the Construction Manager.
11. Emergencies and accidents.
12. Losses of material and or property.

B. Preparation and Transmittal

1. Each item shall include (a) a detailed explanation; and (b) a description of the actions to be taken; and (c) the party responsible for executing those actions.
2. Progress reports shall be generated and delivered to the Construction Manager one (1) business day prior to the weekly project meeting, for the duration of the project.

1.15 DOCUMENTATION

A. Record Set Drawings

1. The Record Set (As-Built) drawings shall include, but may not be limited to equipment and cabling layout and location, schematic and block diagrams, equipment and cable labeling, cable termination points, equipment rack and room layouts and equipment installation details.
2. The As-Built drawings shall accurately reflect and include all field changes made during construction and shall completely and accurately reflect the conditions of the installed systems at the time of acceptance.

B. Operation and Maintenance Manuals

1. These manuals shall utilize a combination of narrative text, graphics and images to describe to the user, how to properly operate and maintain the systems.

- a. The user of this manual is presumed to be technically competent, but unfamiliar with the specific systems.
2. Manuals shall be tabbed and indexed by room and subsystem.
3. Manuals shall include the frequency and scheduled intervals of all system maintenance requirements.
4. The Operation section shall describe all modes of normal operation and the procedures necessary to activate and properly operate each system so as to meet the functional use requirements described within the specifications.
5. The Operation section shall include a laminated 8.5 in. x 11 in. "Quick Reference Guide" to the basic operation and use of each installed system.
6. The Operation section shall include simplified block diagrams for each system and subsystem, with all input and output circuit cable and terminal block numbers and jack field circuit I.D. designations.
 - a. A copy of this block diagram drawing shall be laminated and included within each equipment rack or equipment location.
 - b. All block diagrams shall reference Room Numbers and or Room Names.
7. The Contractor shall provide laminated Quick Reference Guides for each system, describing the basic methods and modes of operation.
8. The Maintenance section shall provide a recommended maintenance schedule, with reference to the applicable pages in the manufacturer's maintenance manuals.
9. The Maintenance manual shall include completed copies of all manufacturer warranty cards, indexed by component type and Room Number and or Room Name.
10. The Maintenance section shall include a list of all required "consumable" products required to maintain the normal operation of each system and or subsystem, including, but not limited to filters, batteries and lamps.
11. In the event that adequate and or sufficiently detailed service or maintenance information is not provided by the

- manufacturer, the Contractor shall provide the information necessary to ensure proper care and maintenance.
12. At acceptance testing, the Contractor shall provide two (2) final revision copies of the Operation and Maintenance manuals to the Owner.
 13. It is expected that User Training shall be based on the use of these manuals.
 14. The Contractor shall provide two (2) laminated copies of the Record Set (As Built) AV drawings for each specified system.
 15. Until final Record Set (As-Built) drawings are approved and accepted, an up-to-date field set of drawings will be maintained in the site office of the Construction Manager or Facilities Manager.
 16. The Contractor shall provide bound copies of product data sheets, which shall be sorted in accordance with the specifications section.
 17. The Contractor shall provide bound copies of all product maintenance manuals.
 18. Pull Schedule as required herein.
 19. Software documentation as required herein
 20. The Contractor shall deliver one (1) complete copy of all closeout documentation to the Consultant, prior to scheduling System Demonstration and Acceptance Testing.

1.16 SOFTWARE SPECIFICATIONS

- A. Software shall be defined as any and all programs, routines, symbolic languages and or other data and or instructions which run or operate a computer and or processor included within the contracted systems, and shall include, but is not limited to the control of all equipment listed within this specification and as shown on all related drawings, including, but not limited to all AV equipment, components and devices, lighting and dimming systems, motorized shades and drapes, Fire Alarm systems, Occupancy sensors and Partition sensors.
- B. The operational capabilities and system functions defined within these project plans and specifications are intended to describe design intent and are provided for reference only. It is the responsibility of the Contractor to ensure that all functional

elements of the project plans and specifications are successfully implemented as described herein.

1. AV control operation and logic flow shall include an Emergency Shut-Down mode which shall be enabled upon Fire Alarm system notification as applicable.
 - a. AV control system Fire Alarm Emergency Shut-Down operation shall conform to the requirements of the authority(ies) having jurisdiction as applicable.
 - b. The Contractor shall coordinate connection to the Fire Alarm system and testing of the AV control system Emergency Shut-Down mode operation as applicable.
- C. AV control Touch Screen and Button configuration, format and function shall be uniform and consistent throughout the facility.
 1. AV Control Panel layout shall be intuitive and provide clear and logical navigation throughout all modes of operation.
- D. Touch Screens shall conform to the 'Style Manual' standards of the Owner, including but not limited to font size, type and color, background color palette and graphic icons, symbols, logos and nomenclature.
 1. User-interface graphics, logos, icons, symbols and nomenclature shall be submitted to, and approved by the Consultant and authorized representative of the Owner.
 2. In the absence of a Touch Screen design "standard" provided by the Owner, the Contractor shall use the InfoComm International "Dashboard for Controls" as a basis and general guide during the development of the software and user interface.
 1. Reference:
[https://www.infocomm.org/fileStore/Dashboard for Controls Design Guide.pdf](https://www.infocomm.org/fileStore/Dashboard%20for%20Controls%20Design%20Guide.pdf)
- E. It is presumed that the design development and implementation of control system source code, programming and specifically, Graphic User Interfaces, is a multi-step, iterative process conducted directly between the Contractor and Owner.
- F. The Contractor shall provide and maintain effective communication and coordination with the Owner and project team throughout the control system development process.

- G. The Contractor shall ensure prompt and timely development and submittal of Touch Screen graphics.
- H. Uncompiled source code for each system shall be delivered to the Owner upon Acceptance. Additionally, copies of the software are to be included within each system manual.
- I. Control Programming Design Development and Record Set (As-Built) Logic Flow diagrams are to be provided to the Owner as a part of the work provided for under these specifications.
- J. Source code must be provided in soft copy and included with all copies of Operation and Maintenance manuals located at each AV equipment rack. The following requirements apply.
 - 1. The Contractor shall retain intellectual property rights to the operating software.
 - 2. The Owner shall be granted a license "in perpetuity" for use as described herein.
 - 3. All source code becomes the exclusive property of Owner.
 - 4. All source code changes shall be fully documented by the Contractor.
 - 5. Updated programming must be updated at all equipment locations and for all equipment manual reference files.
 - 6. All source code and or programming will be warranted by the Contractor for a period of one (1) year, commencing upon acceptance of the contracted system.
 - 7. Manufacturer's software operating system updates, bug fixes, patches, etc., shall be installed as part of the periodic system maintenance performed by the Contractor during the warranty period and as provided for herein, at no cost to the Owner.
- K. Demonstration and Acceptance Testing will be performed upon documented completion of commissioning and certification, at which time, all source code and graphic user interfaces shall be complete, error free and fully functional.
- L. In order to develop effective and intuitive graphic user interfaces, it will be necessary for the Contractor to provide working "Beta" copies of system software and Touch Screens for review and comment by the Owner.

- M. Control system submittals are acknowledged to be part of an iterative process, requiring at least, but not limited to three (3) submittal phases, prior to Demonstration and Acceptance. At a minimum, the software development process will have the following milestones:
1. Initial Programming submittal for review, due not later than one (1) week after return of approved original system shop drawings shall include;
 - a. Logic Flow diagram for each system.
 - b. Full color screen and button layouts for each Touch Screen and or Button Panel.
 2. First Beta Review - Due within two (2) weeks after the return of the initial submittal.
 3. Second Beta Review - Due within two (2) weeks after the return of the First Beta review.
- N. Implementation, on-site testing and commissioning shall be completed not less than (2) weeks prior to the scheduled completion date or the Date of Occupancy, whichever occurs first.
- O. Follow-up Programming Review and Modifications - Sixty (60) days after Acceptance.
1. The Contractor shall meet with the Owner to review end-user feedback and or observations made during the initial period of use.
 2. The Contractor shall make minor modifications to the control system programing as may be required to simplify and or enhance the end-user experience.
 - a. Minor Programming modifications shall not include changes which alter the specified design intent and or requirements.
- P. Software Maintenance Contract
1. Software and firmware provided by the Contractor under this specification shall include all applicable upgrades to applications and operating systems for a period of one (1) year after Acceptance by the Owner.
 2. Software Maintenance visits will be scheduled four (4) times

per year and shall coincide with the contracted periodic maintenance of the systems as specified herein.

3. The Contractor shall offer an annual Software Maintenance contract which shall cover all software provided as part of this specifications and/or written for these systems, and shall include both routine upgrades to applications and operating systems, as well as any modifications to software that may be required by Owner.
 - a. The Software Maintenance contract shall commence immediately upon expiration of the contracted one (1) year warranty period and shall continue in full force and effect, without interruption, for a period of four (4) years.

1.17 WARRANTY and QUALITY ASSURANCE

- A. The Contractor shall warrant all work including, but not limited to all equipment, components, hardware, materials, installation and integration work and services, programming and software, against defects in workmanship and or materials for a period of One (1) Year, commencing upon the date of Acceptance by the Owner.
 1. If during the Year One warranty coverage period, the contracted systems fail to perform as specified, the Contractor shall provide all equipment, materials and labor necessary to diagnose and correct the problem and restore the system to normal operation at no additional cost to the Owner.
 2. Acceptance, in writing, will occur after the project is fully completed and tested in accordance with contract documents, project plans and specifications, and demonstrated to the satisfaction of the Owner and or authorized representative.
- B. The Contractor shall provide Extended Warranty Service coverage, commencing upon completion of the initial Year One coverage, as provided for within these specifications.
- C. The Warranty Coverage Period shall be defined as follows;
 1. Year One - Included within Base Contract.
 - a. Contractor shall warrant all work under this section including, but not limited to all equipment, components, hardware, parts, materials, installation and integration labor and technical services, programming and software, against defects in materials and or workmanship for a period of One Year, at no cost to the Owner, commencing

upon the date of Acceptance by the Owner.

2. Year Two - Extended Warranty and Service.
 - a. Provide annual cost for on-going periodic scheduled inspection, routine and preventative maintenance and on-site service as required to maintain system operation and performance, commencing upon completion of Year One coverage.
 - b. Provide Cost-Plus fixed percentage pricing for the purchase of all non-covered parts, equipment and or materials as may be required to maintain system operation and performance, commencing upon completion of Year One coverage.
3. Year Three - Extended Warranty and Service.
 - a. Provide annual cost for on-going periodic scheduled inspection, routine and preventative maintenance and on-site service as required to maintain system operation and performance, commencing upon completion of Year Two coverage.
 - b. Provide Cost-Plus fixed percentage pricing for the purchase of all non-covered parts, equipment and or materials as may be required to maintain system operation and performance, commencing upon completion of the Year Two coverage.
4. Year Four - Extended Warranty and Service
 - a. Provide annual cost for on-going periodic scheduled inspection, routine and preventative maintenance and on-site service as required to maintain system operation and performance, commencing upon completion of Year Three coverage.
 - b. Provide Cost-Plus fixed percentage pricing for purchase of all non-covered parts, equipment and or materials as may be required to maintain system operation and performance commencing upon completion of the Year Three coverage.
5. Year Five - Extended Warranty and Service
 - c. Provide annual cost for on-going periodic scheduled inspection, routine and preventative maintenance and on-site service as required to maintain system operation and

performance, commencing upon completion of Year Four coverage.

- d. Provide Cost-Plus fixed percentage pricing for purchase of all non-covered parts, equipment and or materials as may be required to maintain system operation and performance commencing upon completion of the Year Four coverage.
- B. If during the optional extended warranty coverage period, the contracted systems fail to perform as specified, the Contractor shall provide all equipment, materials and labor necessary to diagnose and correct the problem and restore the system to normal operation at no additional cost to the Owner, except as may be noted within the extended service and maintenance contract provided by the Contactor.
- C. The Contractor shall provide Level-One Help Desk support via telephone during Normal Business hours as follows;
1. Provide initial response and basic telephone support and troubleshooting such as password verification and reset, standard system configuration set-up and basic troubleshooting instructions.
 2. Gather, document and analyze information regarding the reported issue and determine the best method of resolution.
 3. Initiate escalation for additional technical support including dispatching on-site technicians and providing ongoing support for identified Level 2 and Level 3 issues where configuration solutions have already been documented.
- D. During the warranty coverage period(s), the Contractor shall respond to all requests for Warranty Service in the following manner;
1. Initial Telephone Request
 - a. Contractor shall respond by telephone within one (1) hour, during Normal Business Hours.
 2. Initial Email Request
 - a. Contractor shall respond by email within one (1) hour, during Normal Business Hours.
 3. On-Site Response - Same Day
 - a. Contractor shall respond on-site within four (4) Business

Hours, after initial Contractor response.

- E. During the contracted warranty periods, the Contractor shall provide a minimum of four (4) annual site visits, scheduled at regular intervals, to perform routine operational and performance checks of all equipment, components and systems including, but not limited to;
 - 1. Functional and operational checks to confirm proper operation in all specified modes.
 - 2. Proper cleaning of display screens, projection screens, projector and camera lenses, recording heads and all other critical optical surfaces.
 - 3. Inspection and lubrication of moving parts as recommended by the manufacturers.
 - 4. Adjustment, calibration and alignment of flat panel displays and projection systems as required to maintain optimum registration and focus.
- F. The Contractor shall assume full responsibility for the quality and satisfactory operation of all components and materials not manufactured by Contractor.
- G. In order to maintain certain manufacturer warranties, specified and covered equipment must be installed, configured, programmed, aligned and or otherwise serviced solely and exclusively by factory authorized technicians and or representatives.
 - 1. In the event that the Contractor is not authorized to service specified equipment and or components, it shall be the sole responsibility of the Contractor to make all arrangements and bear all costs and consequences as may be necessary to provide required installation, service, repair or replacement.
- H. All equipment provided by the Contractor shall be new and shall meet or exceed all latest and current published specifications issued by the manufacturer.
- I. The Contractor shall provide only the latest model, revision or version of a specified piece of equipment, component and or software, effective at the time of bid response.
 - 1. Contractor shall review, validate and confirm all specified product model numbers are accurate, and specified models meet the functional requirements of this specification and remain in current production.

- J. Any product submitted after award of the contract must not increase contract cost, except when such product is provided as an upgrade, requested and approved by the Owner.
- K. All warranties provided by manufacturers shall be extended to the Owner and certified in writing.
- L. All manufacturers' equipment warranties shall be activated in the Owner's name and shall commence on the date of system acceptance.
- M. In the case of Contractor-modified equipment, the manufacturer's warranty may be voided. In such cases, the Contractor shall provide the Owner with a warranty equivalent to that of the original manufacturer.
- N. As a part of the bid response, the Contractor shall provide costs for optional Extended Warranty and Service Coverage periods as specified in the Appendix 1 Master Recapitulation of Costs Summary.

1.18 JOB CONDITIONS

- A. Verify all existing conditions. Refer to the Owner or authorized representative for coordination and clarification before the bid date, of any discrepancies concerning existing conditions, drawings, and specifications.
- B. Clarify with the Owner, all locations including conduit and cable paths. Where discrepancies occur and pre-bid instructions have not been obtained, abide by the direction and decision of the Owner.
- C. Conduct ongoing surveys and inspections of all work areas, throughout the construction process, in order to locate and confirm all penetrations, poke-thru and floor boxes, furniture openings, sleeves, conduit and conduit stubs, bushings, cable trays, blocking and backing, in-wall display mount and conduit termination boxes, AV device boxes, low voltage rings, pull strings, and all other elements associated with this work provided by others.
 - 1. If during the course of ongoing survey and inspection, the Contractor observes a condition which appears to conflict with the project plans and specifications, the Contractor shall immediately notify the Construction Manager of the potential discrepancy.
 - 2. The Construction Manager shall evaluate the reported condition and provide the Contractor with direction as may be required.
- D. Costs for all additional and or rework, directly or indirectly affecting the Contractor scope of work as described within these

specifications, resulting from, or due to ineffective coordination and or field inspection and verification by the Contractor, shall be paid by the Contractor.

- E. It is the sole responsibility of the Contractor to employ a workforce consistent with the building workforce or trade union jurisdictional guidelines in effect at the project location.
- F. It shall be the Contractor's responsibility to cooperate, at all times, and to the fullest extent, with any and all other trades performing work on the premises, in order to avoid delays in the work, lost time, work stoppages, interference and or other inefficiencies.
- G. It shall be the sole responsibility of the Contractor to fully investigate and understand any and all potential contract, union, facility, access and or scheduling limitations, questions, risks and or issues, prior to submitting a bid, and to comply with all requirements and regulations in force and effect on the job site.
 - 1. All potential issues and or conflicts should be clearly identified and addressed in the bidder's response.
 - 2. The Contractor shall not be permitted to modify their proposal in the event that workplace trade jurisdiction requirements have not been adequately met in the bidder's response.
- H. The Contractor shall be responsible for meeting all project schedules and milestone dates.
- I. Furnish, install, and terminate all required wire and cable (to the extent not provided by others).
- J. Comply with all requirements regarding the use of cable with respect to spread of fire. Refer to drawings for identification of air plenum and other spaces having special cabling requirements.
- K. It is the responsibility of the Contractor to provide wiring that is in compliance with all applicable codes and requirements of the authority(ies) having jurisdiction.
- L. Comply with all Seismic requirements regarding the installation of all hardware, mounts, equipment and or components.
- M. It is the responsibility of the Contractor to employ installation means and methods that are in compliance with all applicable building codes, rules and regulations of the authority(ies) having jurisdiction.

N. The Contractor shall be solely responsible for the care, custody, safety and protection of all installed and configured systems and non-installed, stored materials, tools and supplies.

1.19 FEES, PERMITS, AND NOTICES

A. The Contractor shall perform all work in compliance with all applicable requirements of the authority(ies) having jurisdiction.

B. The Contractor shall apply for, secure and maintain all required construction permits, pay all fees, and file all notices as required, at no additional cost to the Owner.

1.20 CODES AND STANDARDS

A. All work performed under the scope of this specification shall conform to all applicable codes and standards, including but not limited to;

1. Local Electrical Codes
2. National Fire Protection Association
3. NFPA 70 National Electrical Code current and applicable sections including, but not limited to Article 250 Grounding and Article 800 Communications Circuits
4. Underwriters Laboratories, Inc.
 - a. UL Listed
 - b. UL Approved
5. Building Officials and Code Administrators (BOCA) International, Inc.
6. International Building Code 2012
7. In the event that a conflict occurs, the Contractor is directed to meet, satisfy, adhere to and or otherwise comply with and conform to the most stringent requirement.
8. All authorities having jurisdiction over the work performed under the scope of this specification.

1.21 DELIVERY, STORAGE, AND HANDLING

A. Delivery

1. Deliver materials and equipment in sufficient time to allow for inspection, installation and testing in accordance with the project schedule.
 - a. All arrangements for access and unloading at the site shall be coordinated and scheduled with the Construction Manager, not less than forty-eight (48) hours prior to the scheduled delivery.
2. Movement, staging and layout of material, either at the time of delivery or subsequently, shall be the sole responsibility of the Contractor.
 - a. All costs associated with the movement, staging and layout of AV equipment, materials, tools and supplies shall be the sole responsibility of the Contractor.
3. The Contractor shall be solely responsible for ensuring that all equipment can be successfully delivered to the installation locations including, but not limited to elevator cab size and stairwell dimensions and all door, corridor and turn radius dimensions.
4. Delivery schedules, which may be affected by environmental conditions, shall be noted in writing to the Construction Manager, not less than twenty-four (24) hours prior to the scheduled delivery.

B. Storage and Protection

1. The Contractor shall be solely responsible for the care, custody and safekeeping of all equipment, components, materials, tools and supplies while stored on the job site, including all tools, materials and test equipment, which are, and shall remain the property of the Contractor.
2. The Contractor shall take all reasonable and necessary precautions to protect all work from dust, debris and damage during construction.

1.22 CLEAN-UP

- A. The Contractor shall be responsible for the cleanup and repair of all areas and work affected by this installation.
- B. The Contractor shall, on a daily basis, remove all debris created, caused, or resulting from this work, including all cut and removed cables, connectors and all other work-related debris.

- C. Prior to acceptance of work, all areas used or entered by the Contractor must be cleared of any materials or debris caused directly or indirectly by the Contractor, to the satisfaction of the Owner or authorized representative.

PART 2 PRODUCTS

2.1 GENERAL

- A. The requirements in the section shall apply to all areas receiving systems, subsystems and or equipment and components as described herein.
- B. Provide materials and equipment conforming to the applicable requirements of:
 - 1. Underwriter's Laboratories (UL)
 - 2. National Electrical Code (NEC)
 - 3. American National Standards Institute (ANSI)
 - 4. Federal Communications Commission (FCC)
- C. Prior to procurement and delivery, confirm and verify all product quantities and manufacturer model and part numbers are correct and complete, including all required accessories and or options.
- D. Provide only equipment, components and materials, which are new, free from use and fully covered by all applicable manufacturer's warranties.
- E. Provide only current-model components, equipment and materials. Do not provide obsolete or discontinued models.
 - 1. Review all materials and equipment immediately prior to procurement and or installation and inform the Construction Manager and or Owner's representative of any obsolete or discontinued items and or products.
 - 2. Review all equipment lists at time of procurement, confirming product availability and delivery lead time with manufacturers and distributors. Inform the Construction Manager and or Owner's representative of any item or product which is back-ordered and or out of stock.
- F. In the event that unplanned delays or backorder status of specified products may adversely impact the project schedule, the Contractor shall propose equivalent replacements and or upgrades, at no

additional cost to the Owner.

G. Audiovisual systems are based on the following general product manufacturers and performance specifications and criteria:

- | | |
|--------------------------------------|-----------------|
| 1. Flat Panel Displays | Planar Clarity |
| 2. Display Wall Mounts | Planar Clarity |
| 3. Signal Conversion and Transport | Crestron |
| 4. Signal Switching and Routing | Crestron |
| 5. AV Control | Crestron |
| 6. AV Equipment Racks and Enclosures | Middle Atlantic |
| 7. Video Camera | Sony Pro |
| 8. Digital Signal Processor (DSP) | Crestron |
| 9. Audio Amplifier | QSC |
| 10. Ceiling Microphone-Pendant | Audix |

PART 3 EXECUTION

3.1 GENERAL

- A. Review all contract documents, including specifications, drawings, appendices and addenda.
- B. Review all related project drawings including, but not limited to electrical, telecommunications, furniture and millwork as required to ensure effective and efficient coordination with other trades.
- C. Prepare all pre-construction submittals as specified herein.
- D. Field survey and confirm the location and trade size of all conduit, in-wall boxes, sleeves, penetrations, raceways, cable paths, cable tray, junction boxes and device boxes provided by others, which are intended for use in the installation of the specified systems.
- E. Complete fabrication, assembly, installation, integration, testing, calibration, commissioning and certification of all work specified herein.
- F. Provide post-construction submittals including complete and accurate Record Set (As-Built) drawings, field test reports and warranty

documents as specified herein.

G. The plans and specifications indicate the general arrangement and scope of work. Any proposed changes shall be submitted to the Construction Manager and Consultant, prior to implementation.

1. The Consultant must approve the work, in writing, prior to implementation and or execution of the proposed change.
2. Approved change must be noted on shop drawings, As Built drawings and in accordance with sections related to Substitutions, Deviations, and Changes, and Shop Drawings.

3.2 SAFETY

A. The Contractor shall comply with all safety guidelines and regulations established for the project.

3.3 INSTALLATION

A. Installation shall include but is not limited to staging, delivery, unloading, setting in place, rack-mounting, fastening to or within furniture, millwork, walls, floors, ceilings, counters or other structures where required; installation and interconnection of all equipment, components and wiring; equipment calibration, alignment and adjustments; and all other work, whether or not expressly described or defined herein, which is necessary to result in the complete and satisfactory installation of fully operational systems as described within the project plans and specifications.

B. All work shall be performed in accordance with, but not limited to these specifications and drawings, and the best practices associated with such work.

C. All work shall be performed in accordance with the applicable standards, requirements, regulations and recommendations of the inspecting authority(ies) having jurisdiction.

D. The Contractor shall be solely responsible for the means and methods associated with work under this section.

E. If, in the opinion of the Contractor, an alternate installation method or practice is desired or required, which is at variance with, and or contrary to these specifications or drawings, a written request for modification shall be made to the Consultant.

1. Modifications and or changes to the specified systems shall not commence without prior written approval of the Consultant.

- F. All equipment shall be firmly secured in place unless requirements of in-use motion and or portability dictate otherwise.
 - 1. Fastenings and support hardware shall be SAE J429 Grade 8 or better and shall be sized as required to support their loads with a minimum safety factor of not less than five (5)times the actual load, or with maximum tolerances as specified by the manufacturer, whichever is greater.
- G. The Contractor shall be solely responsible for ensuring that all installation means and methods conform to the requirements of the inspecting authority(ies) having jurisdiction.
- H. All boxes, plates, panels, equipment and other project elements shall be properly secured and installed plumb, level and square.
- I. All wall-mounted back boxes and or other equipment furnished by the Contractor shall be provided in coordinated fashion with the schedule of the General Contractor and shall be pre-drilled to meet conduit specifications.
- J. With regard to the installation of equipment and cable, thoughtful consideration shall be given not only to operational efficiency, but also to overall aesthetic factors.
- K. All cables, regardless of length, shall be marked with wrap-around number or letter cable markers at both ends as specified herein. There shall be no unmarked cables at any place, point or location in any system or subsystem.
- L. All inter-rack cabling shall be neatly installed, secured, dressed, and adequately supported. Audio and video cabling shall be separated from each other and from power cabling.
- M. Terminal blocks, boards, strips, or connectors shall be furnished for all cables, which interface with racks, cabinets, consoles, or equipment modules.
- N. All cables shall be neatly grouped according to signal type and level. in order to reduce crosstalk and other types of signal contamination, separate groups shall be formed for the following cables;
 - 1. Power cables
 - 2. Control cables
 - 3. Video cables

4. Audio cables - Signals less than -20 dBm.
 5. Audio cables - Signals between -20 dBm and +20 dBm.
 6. Audio cables - Signals above +20 dBm.
- O. No cable shall be installed having a bend radius, less than that recommended by the cable manufacturer.
 - P. Cable and wiring shall be protected at all times during installation.
 - Q. All cable runs shall be continuous, with no factory or field splices.
 - R. All AV cabling, wiring and equipment shall have an independent means of support furnished and installed by the Contractor.
 1. At no time, shall an audiovisual system cable, wire or component be supported on or by sprinkler pipes, HVAC ducts, lighting fixtures, ceiling grid, ceiling tiles, and or any other equipment or infrastructure.
 2. All installation means and methods shall conform to the requirements and or direction of the authority(ies) having jurisdiction.

3.4 GROUNDING

- A. All grounding shall conform to all applicable National Electric Code requirements including, but not limited to Article 250.
- B. The Contractor shall be solely responsible for ensuring all work provided under this scope is free of crosstalk, hum, buzz and or other defects or anomalies resulting from improper grounding.
- C. A single, primary "system ground" shall be established for each system. All grounding conductors shall connect to this primary system ground.
 1. The system ground shall be provided in the AV equipment rack and shall consist of a copper bar of sufficient size to accommodate all secondary grounding conductors.
- D. Under no condition and in no circumstance, shall the AC neutral conductor, either in the power panel or in a receptacle outlet, be used for a system ground.
- E. It shall be the responsibility of the Contractor to follow good

engineering practice, as outlined above, and to deviate from these practices only when necessary to minimize crosstalk and to maximize signal-to-noise ratios in the audio, video, and control systems.

3.5 CABLES AND CONNECTORS

A. Video Cable

- | | | |
|----|----------------------|-----------------------|
| 1. | RF Riser | Commscope P3-500 JCAR |
| 2. | RF Drop | Belden 1153A (RG11) |
| 3. | Baseband | Belden 1505A |
| 4. | RGBHV | Canare V5-5C |
| 5. | RGBHV (High Density) | Extron BNC-5 |
| 6. | DBS | Belden 1829A |

B. Audio Cable

- | | | |
|----|--------------------------------|--------------|
| 1. | Mic/Line Level | Belden 8761 |
| 2. | Speaker Level-8 ohm (<25 feet) | Belden 8473 |
| 3. | Speaker Level-8 ohm (>25 feet) | Belden 8477 |
| 4. | Speaker Level-70v | Belden 8461 |
| 5. | Digital Audio | Belden 1800F |

C. Control Cable

- | | | |
|----|---------------------|---------------------------|
| 1. | 4 Conductor | Belden 9418 |
| 2. | 12 Conductor | Belden 9556 |
| 3. | Composite Cable | Extron 17 conductor cable |
| 4. | Digital Media | Crestron DM-CBL-8G-P |
| 5. | Category 6 Shielded | Belden 1352A |

D. Other cable types are to be submitted to the Consultant for consideration and approval.

E. All cable installed without conduit shall be plenum rated and shall match the performance specifications of the approved cables specified above.

- F. Cables running in areas exposed to environmental factors such as, but not limited to, UV, chemicals, direct burial, etc. shall be rated for such exposure and shall match the performance specifications of approved cable specified above.
- G. All cables (except video and sync cables which must be cut to an exact electrical length) shall be cut to the length dictated by the cable run. No splices shall be permitted.
- H. All rack wiring connections and all equipment mounted in drawers or on slides, shall include interconnecting cables with a service loop of sufficient length so as to facilitate access and freedom of movement during installation and service.
- I. No cable shall be installed with a bend radius less than that recommended by the cable manufacturer.

J. Connector Types

- | | | |
|-----|---|-----------------------|
| 1. | Audio - Microphone (Type 1) | XLR-3 Type |
| 2. | Audio - Microphone (Type 2) | XLR-5 Type |
| 3. | Audio - Line Level (Type 1) | 1/4 in. TRS |
| 4. | Audio - Line Level (Type 2) | 3.5 mm TRS |
| 5. | Audio - Line Level (Type 3) | RCA Type, Insulated |
| 6. | Audio - Loudspeaker Level | Neutrik Speak-on Type |
| 7. | Intercom | XLR-4 |
| 8. | Video | BNC Type, Insulated |
| 9. | RF | F Type |
| 10. | Digital Media | Crestron DM-8G-CONN |
| 11. | Connectors for other signal types are to be submitted to the Consultant for approval. | |

K. Patch Panel Assignments

- 1. All patch panels shall be wired so that signal Sources (outputs) appear on the upper row of a row pair; and all Loads (inputs) appear on the lower row of a row pair.

2. Patch Panel Designation Strips

- a. All audio and video patch panel designation strips shall utilize alphanumeric identification and descriptive information.
- b. The jack position in each horizontal row shall be numbered sequentially from left to right.
- c. The horizontal jack rows shall be lettered sequentially from top to bottom.
- d. The alphanumeric identification of each jack shall be included on the functional block drawings, as well as on reproductions of these drawings, which shall be mounted in an appropriate location near the patch bays.

L. Fire Stopping System

1. Install approved penetration seal materials in accordance with design requirements and manufacturer's instructions.
2. Verify that all penetrating elements and supporting devices have been installed and temporary lines have been removed.
 - a. If forms of damming materials are installed, they shall be removed after the designated cure time.
3. Contractor shall use only FM approved fire-stopping materials and methods. All materials and methodologies shall be submitted to the Construction manager prior to utilization.

K. Identification

1. All equipment racks shall bear an identification plate, provided and installed by the Contractor, which shall be mounted on the front of each equipment rack and which shall contain the following information:

SYSTEM DESIGNED & ENGINEERED BY:

AKF Group
1 Liberty Plaza
165 Broadway
New York, NY 10021
Telephone 212.354.5656
www.akfgroup.com

SYSTEM FABRICATED & INSTALLED BY:

Contractor Name
Address line 1
Address line 2
Address line 3
Telephone Number
Website

2. Engraving shall be white filled Helvetica lettering on a black background or as appropriate to the identification plate material.

L. SYSTEM CHECKOUT

1. Prior to scheduling Demonstration and Acceptance testing, the Contractor shall perform comprehensive system operation and performance testing.
 - a. The Contractor shall furnish all required test equipment and shall perform all work necessary to determine and or modify performance of the system to meet the requirements of this specification.
2. During operation and performance testing, all equipment shall be operated under normal operating conditions as defined and or recommended by the manufacturer.
3. Contractor shall test and certify all audio and video systems for compliance with the Performance Standards using the test procedures defined later in this specification.
4. Contractor shall maintain documentation of all performance tests for reference by the Consultant during Demonstration and Acceptance testing.
5. At the conclusion of testing, return all equipment settings to previously calibrated Normal operating positions.
6. Provide written records of all test results in spreadsheet form.
7. Check and confirm all control functions for proper operation, throughout the entire signal path, from all controlling devices to all controlled devices.
8. Adjust, balance and align all equipment for optimum quality and to meet the manufacturer's published specifications.

9. Establish and mark "Normal" settings for all level controls and record these settings in the "System Operation and Maintenance Manual".
10. The Contractor shall provide test results and settings for all equipment and systems to the Consultant at least three (3) business days prior to scheduled Demonstration and Acceptance Testing.
11. The Contractor shall notify the Construction Manager and Consultant, in writing, that the work is complete and ready for Acceptance Testing by the Consultant.
 - a. The work shall be considered ready for Demonstration and Acceptance testing when the Contractor notifies the Construction Manager and Consultant, in writing, that the following conditions are met:
 - (1) The Contractor has pre-tested all systems such that all sub-systems, functions, software and equipment are properly installed, set-up, configured, debugged and fully operational as specified.
 - (2) The Contractor has supplied the Consultant with the written test results and documentation as listed above, for all rooms and systems.
 - (3) The Contractor has supplied the Consultant with manuals, training materials and all other required As-Built documentation, revised to reflect comments and or revisions arising from the review cycles listed elsewhere within this document.
12. Should the systems not be ready for testing by the Consultant at the date(s) and time(s) indicated by the Contractor, system acceptance testing may be rescheduled at the sole discretion of the Consultant.
13. In the event of rescheduling due to the Contractor's lack of preparedness, the Contractor shall pay the costs of all labor and expenses of the Consultant and other project team members for the rescheduled testing date(s).
 - a. The labor rate for the Consultant shall be a flat rate of \$250.00 per hour, portal to portal, including travel time.
 - b. Other project team member labor costs shall be at their respective published rates.

criterion, as measured within the coverage area of the system is within ± 3 dB of a spectrum which is flat from 250 Hz to 5000 Hz and slopes downward thereafter at a rate of 3 dB per octave to 12,500 Hz.

- a. Test signals shall be broad band "pink" noise applied to any system input, measured using 1/3-octave filters centered on ANSI preferred frequencies.

2. Spatial Uniformity

- a. The spatial level uniformity criterion, throughout the coverage area of the system, is that amplified sound levels shall not vary more than ± 3 dB as measured using a test signal consisting of an octave band of "pink" noise centered at 4,000 Hz.
- b. Measurements of system performance will be made using a calibrated ANSI or IEC precision sound level meter set for "slow" meter damping and flat response, 4 feet above the floor (seated ear height) within the system coverage area.
- c. All interior finishes and furnishing shall be in place, and system gain shall be adjusted to provide levels of at least 72 dB or 10 dB above background noise levels, whichever is higher, at the measuring locations for these tests.

3. Absolute Impedance

- a. Set speaker level controls at zero attenuation. Measure absolute impedance value of each speaker line at 250, 500, 1,000, 2,000 and 4,000 Hz without the amplifier connected but with all speakers connected. Impedance must not be below the rated load impedance of respective amplifier and may be any value equal to or above that.
- b. Check resistance of lines to all speakers and microphone receptacles with receptacles open and short-circuited.

4. Hum and Noise Level

- a. Test overall hum and noise and adjust system to ensure level is not less than 60 dB below rated power output of each amplifier with amplifier controls set for optimum signal to noise and full output and with inputs terminated with proper shielded resistors. (150 and 600 ohms).

5. Electrical Distortion
 - a. Load power amplifiers with resistors matching nominal impedance of output terminals used in the system in place of actual loudspeaker loads.
 - b. Adjust gain controls as for hum and noise level test.
 - c. Apply 250, 500, 1,000, 2,000 and 4,000 Hz sine-wave signal from an oscillator having less than 0.1% T.H.D. to each microphone and line level input at level required to produce full amplifier output.
 - d. Distortion must measure less than 1%.
6. Parasitic Oscillation and RF Pickup
 - a. Check to ensure that the system is free of spurious oscillation and RF pickup in the absence of any input signal and also with the system driven to full output at 160 Hz.
7. Buzzes, Rattles and Distortion
 - a. Apply high quality music signal to the system. Adjust the sound system for frequent peaks at its specified maximum sound pressure level.
 - b. Apply sine-wave sweep from 50 to 5,000 Hz to 6 dB below full amplifier power.
 - c. In both cases, listen carefully for buzzes, rattles and objectionable distortion.
 - d. Correct all causes of such defects. If cause is not from system, promptly notify the architect indicating cause and suggested corrective procedures.
8. Level Balance
 - a. Adjust all items of similar equipment for identical measured voltage gain.
9. Unless otherwise specified, render tamper proof using security covers on all controls effecting overall system level balance and signal to noise ratio, such as power amplifier input level control, and input-output level controls for equalizers, etc.

10. Some controls may require readjustment during and or as the result of Demonstration and or Acceptance Testing.
11. Equalize all audio systems for maximum gain before feedback in all room configurations.
12. Document and record all systems settings for inclusion into systems manuals.

B. Video

1. Signal Paths

- a. Utilizing a video color bar generator and waveform analyzer with the video signal set at 100% saturation and 75% amplitude check that the video performance specifications are met at the display devices from all source inputs to all system outputs at the following standards:

1. NTSC 720x480
2. HDTV (720p) 1280x720
3. HDTV (1080p) 1920x1080
4. UHD TV (2160p) 4096x2160

- b. Connect the combined Waveform monitor/ Vector scope to a final output point, e.g. an input to a display monitor or video projector. Ensure that the test signal is routed to the selected output.

1. Level Balance - Adjust all video projection equipment to produce the best image possible. Ensure that horizontal sweep circuitry is not over driven to the point of audible sweep frequencies being emitted.
2. Adjust all video monitors, disc players, and all other video sources for optimum image quality, brightness and contrast.
3. Record all systems settings for inclusion into systems manuals

C. RGBHV

1. For all RGBHV inputs, connect the RGBHV output of the signal

generator to a floor box, tabletop input and or rack connector and select the SMPTE & PLUGE signal at the following computer scan rates:

- | | | | |
|----|-------------|-----------|--------|
| a. | 640 x 480 | 31.5kHz H | 60Hz V |
| b. | 640 x 480 | 37.5kHz H | 75Hz V |
| c. | 800 x 600 | 38kHz H | 60Hz V |
| d. | 1024 x 768 | 48kHz H | 60Hz V |
| e. | 1024 X 768 | 48kHz H | 75Hz V |
| f. | 1280 x 1024 | 64kHz H | 60Hz V |
| g. | 1400 x 1050 | 65kHz H | 60Hz V |
| h. | 1600 x 1200 | 75kHz H | 60Hz V |
| i. | 1920 x 1080 | 75kHz H | 60Hz V |
| j. | 1920 x 1200 | 75kHz H | 75Hz V |

2. Check that the image is correctly displayed at all system outputs including all monitors and or video projectors.
3. Repeat using Crosshatch, Checkerboard, and H Pattern Signals.

D. Optical

1. All optical projection systems shall meet the following performance standards:
 - a. The total averaged light output from a projector, in lumens, shall be within plus-or-minus 10% of that specified by the projector manufacturer.
 - b. The light fall-off from the center of the projected image to all four corners, as measured at the projected image plane, shall not exceed 30%.
 - c. The light intensity shall be measured at all five positions of the projected image after the projector has been adjusted to provide the light output as specified above.
 - d. The "corner" locations shall be defined as the four points determined by intersecting lines drawn 5% of the distance in from the focused edges of the image.
 - e. The light meter used for the above measurements shall be a properly calibrated foot-candle (or lux) meter and shall be cosine-corrected.

- f. Projectors, lenses, and mirrors shall be solidly mounted, braced and isolated so that there will be no observable movement in the image induced by motor vibration or other mechanical operations.

END OF SECTION 274000

Refer to Appendix 1

Master Recapitulation of Costs Summary