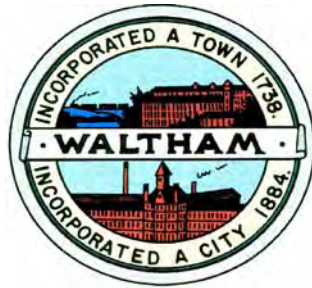


The City of Waltham



**Invites
Interested Parties
To propose the best offer and or bid
For the service or product herewith described:**

**GYMNASIUM AND AUDITORIUM RESTORATION AT
THE SOUTH MIDDLE SCHOOL**

The bid opening will be held:

Wednesday November 16, 2011, at 10:30 am for General Bid

Wednesday November 9, 2011 at 10:30 am for Filed Sub Bids

<u>TABLE OF CONTENTS</u>	2
--------------------------	---

SECTION

BIDDING DOCUMENTS

00 05 00 - NOTICE TO BIDDERS, INCLUDING SUB -BIDDERS	2
00 10 00 - INSTRUCTION TO BIDDERS	9
00 30 00 - FORM FOR GENERAL BID	3
00 31 00 - FORM FOR SUB-BID	4
00 32 00 - PREVAILING WAGE RATES	11
00 42 00 - BID ACCEPTANCE FORM	1

CONTRACT DOCUMENTS

00 50 00 - STANDARD FORM OF AGREEMENT	6
00 61 00 - PERFORMANCE BOND AND PAYMENT BOND	7
00 63 00 - APPLICATION AND CERTIFICATE FOR PAYMENT	1
00 64 00 - CERTIFICATE OF SUBSTANTIAL COMPLETION	1
00 65 00 - CERTIFICATE OF INSURANCE	1
00 65 50 - CHANGE ORDER	1
00 66 00 - GENERAL RELEASE AND WAIVER OF LIEN-GENERAL CONTRACTOR	1
00 66 10 - GENERAL RELEASE AND WAIVER OF LIEN- SUBCONTRACTOR /MATERIAL SUPPLIER	1
00 70 00 - GENERAL CONDITIONS	39
00 85 10 - DRAWING LIST	1

TECHNICAL SPECIFICATIONS

<u>DIVISION 01</u>	<u>GENERAL REQUIREMENTS</u>
01 01 00 - SUMMARY OF WORK	4
01 04 00 - SPECIAL PROJECT PROCEDURES	9
01 05 00 - CONDUCT OF THE WORK	2
01 09 00 - DEFINITIONS AND STANDARDS	3
01 30 00 - SUBMITTALS	6
01 40 00 - QUALITY CONTROL	2
01 50 00 - TEMPORARY FACILITIES	5
01 51 00 - PROTECTION	4
01 52 00 - CLEANING UP	3
01 70 00 - PROJECT CLOSEOUT	3
01 72 00 - SURVEYS AND RECORD DRAWINGS	2

<u>DIVISION 02</u>	<u>SUBSURFACE INVESTIGATION & DEMOLITION</u>	
02 41 00 - SELECTIVE DEMOLITION		6
<u>DIVISION 04</u>	<u>MASONRY</u>	
04 23 00 - REINFORCED UNIT MASONRY		6
<u>DIVISION 05</u>	<u>METALS</u>	
05 40 00 - COLD-FORMED METAL FRAMING		6
05 50 00 - MISCELLANEOUS METALS		5
<u>DIVISION 06</u>	<u>WOOD AND PLASTIC</u>	
06 10 00 - ROUGH CARPENTRY		5
06 20 00 - FINISH CARPENTRY		
<u>DIVISION 07</u>	<u>THERMAL AND MOISTURE PROTECTION</u>	
07 92 13 - SEALANTS AND CAULKING		3
<u>DIVISION 08</u>	<u>DOORS AND WINDOWS</u>	
08 71 00 - FINISH HARDWARE		21
08 80 00 - GLASS AND GLAZING		6
<u>DIVISION 09</u>	<u>FINISHES</u>	
09 24 23 - FURRING, LATHING, AND PLASTERING		10
09 25 50 - GYPSUM BOARD ASSEMBLIES		11
09 99 00 - PAINTING		5
	(Filed Sub-Bid Required – Painting)	
<u>DIVISION 11</u>	<u>EQUIPMENT</u>	
11 66 00 - ATHLETIC EQUIPMENT		8
<u>DIVISION 13</u>	<u>SPECIAL CONSTRUCTION</u>	
13 12 50 – ANGLE FRAME BLEACHERS		4
<u>DIVISION 26</u>	<u>ELECTRICAL</u>	
26 00 00 - ELECTRICAL		22
	(Filed Sub-Bid Required - Electrical)	

**SECTION 00 05 00
CITY OF WALTHAM
MASSACHUSETTS
NOTICE TO BIDDERS, INCLUDING SUB-BIDDERS
GYMNASIUM AND AUDITORIUM RESTORATION AT
SOUTH MIDDLE SCHOOL
WALTHAM, MASSACHUSETTS**

The City of Waltham, Massachusetts invites sealed bids from Contractors for the Gymnasium and Auditorium Restoration at South Middle School, Waltham, Massachusetts. The work includes refinishing floors, painting, carpentry, plaster repair, gym equipment, lighting, and electrical.

PLANS, SPECIFICATIONS and other Contract Documents may be obtained by e-mail request at www.jpedulla@city.waltham.ma.us or by visiting the City's web site at www.city.waltham.ma.us/purchasing/index.html

Joseph Pedulla
Purchasing Department
Waltham City Hall
610 Main Street
Waltham, Massachusetts 02452

Copies of Addenda will be mailed or delivered to the registered Bidders without charge. Documents will **not** be mailed.

Sealed **SUB-BIDS** for categories of "Painting" and "Electrical" will be accepted at the Purchasing Department, Waltham City Hall, 610 Main Street, Waltham, MA 02452 until 10:30 AM on November 9, 2011, at which place and time they shall be publicly opened, read aloud and recorded for presentation to the Awarding Authority.

Sealed **GENERAL BIDS** for this project will be accepted from eligible bidders at the Purchasing Department, Waltham City Hall, 610 Main Street, Waltham, MA 02452 until 10:30 AM on November 21, 2011, at which place and time they shall be publicly opened, read aloud and recorded for presentation to the Awarding Authority.

A **PRE-BID CONFERENCE** will be held for all interested parties at 10:30 AM on November 2, 2011 at the site at the South Middle School Building, 510 Moody Street, Waltham, MA. Attendance at this pre-bid conference is strongly recommended for parties submitting a bid. It will be the only opportunity to visit the site prior to the bid opening.

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

To be given consideration, all general bids and all sub-bids must be accompanied by a copy of the Bidder's Certificate of Eligibility (DCAM Form CQ7) and an Update Statement (DCAM Form CQ3). The General Bidder must be certified eligible in the General Building category and the filed sub-bidders must be certified in their respective categories.

Bids shall be made on the basis of the Minimum Wage Rates as determined by the Commissioner of Labor and Industries, Pursuant to the Provisions of Chapter 149, Sections 26 to 27D inclusive of Massachusetts General Laws, a copy of which is attached to and is made a part of the Contract.

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

Performance and Labor and Materials payment bonds in the full amount of the contract price will be required from the successful bidder.

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

The successful bidder will be required to furnish a **Certificate of Insurance**, naming the City of Waltham and CBI Consulting Inc. as **NAMED Additional Insured** with a waiver of subrogation, for General Liability and Vehicle Liability in the amount of \$500,000 per occurrence and \$1,000,000 in the aggregate and Worker's Compensation Insurance as prescribed by law.

In accordance with M.G.L., the undersigned certifies that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by OSHA that is at least 10 hours in duration at the time the employee begins work and shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

CITY OF WALTHAM

Joseph P. Pedulla, CPO
Purchasing Department
City Hall, 610 Main Street
Waltham, MA 02452

END OF SECTION

NOTICE TO BIDDERS, INCLUDING SUB-BIDDERS

00 05 00 - 2

SECTION 00 10 00 - INSTRUCTION TO BIDDERS

PART 1 - GENERAL

1.01 SCHEDULE OF DATES

- A. Deadline for Advertisement for Bids: Central Register – October 25, 2011, 4:00 P.M.
- B. Advertisement appears in Central Register, Plans and Specifications ready for Bidders at the Offices of the Waltham Purchasing Agent after 8:30 A.M. on October 25, 2011.
- C. Pre-bid walkthrough on Monday, November 2 2011, at 10:30 A.M at the South Middle School, 510 Moody Street, Waltham, MA.
- D. Questions and requests for interpretations may be submitted in writing by the Filed Sub-Bidders to the Architect up to and including: November 7, 2011, 4:00 P.M., and by General Bidders up to and including: November 14, 2011, 4:00 P.M.
- E. Addenda will be issued with interpretations as determined by the Architect.
- F. File Sub-Bids Deadline: 10:30 A.M. on November 9, 2011, in the Purchasing Department, City Hall, 610 Main Street, Waltham, MA 02452, Attn: J. Pedulla, Purchasing Agent, where the bids will be publicly opened and read.
- G. General Bids Deadline: 10:30 A.M. on November 16, 2011, in the Purchasing Department, City Hall, 610 Main Street, Waltham, MA 02452, Attn: J. Pedulla, Purchasing Agent, where the bids will be publicly open and read.

1.02 BIDDING PROCEDURE

- A. Bids for the work are subject to the provisions of General Laws, Chapter 149, Sections 44A-44L inclusive, as amended. Regulations governing the bidding procedures as set forth in the above mentioned amended General Laws must be followed.
- B. In the event of any inconsistencies between any of the provisions of these Contract Documents and of the cited statute, anything herein to the contrary notwithstanding, the provisions of the said statute shall control.
- C. No General Bid received by the Awarding Authority after the time respectively established herein for the opening of General Bids will be considered, regardless of the cause for the delay in the receipt of any such bid.

1.03 WITHDRAWAL OF BIDS

- A. Bids may be withdrawn prior to the time respectively established for the opening of General Bids only on written request to the Awarding Authority.

1.04 INTERPRETATION OF CONTRACT DOCUMENTS

- A. No oral interpretation will be made to any bidder. All questions or requests for interpretations must be made in writing to the Architect.
- B. Every interpretation made to a bidder will be in the form of an Addendum to the drawings and/or specifications, which will be made available to all persons to whom Contract Documents have been issued.

- C. Failure of the Awarding Authority to send, or of any bidder to receive any such Addendum shall not relieve any bidder from obligation under his bid as submitted.
- D. All such Addenda shall become a part of the Contract Documents.

1.05 EXAMINATION OF SITE AND CONTRACT DOCUMENTS

- A. Each bidder shall visit the site of the proposed work and fully acquaint himself with conditions as they exist, and shall also thoroughly examine the Contract Documents. Failure of any bidder to visit the site and acquaint himself with the Contract Documents shall not relieve any bidder from any obligation with respect to his bid.
- B. By submitting a bid, the bidder agrees that the Contract Documents are adequate and that the required result for a full and complete installation can be produced. The successful bidder shall furnish any and all labor, materials, insurance, permits and all other items needed to produce the required result to the satisfaction of the Awarding Authority.

1.06 BID SECURITY

- A. The General Contractor's bid must be accompanied by bid security in the amount of five percent (5%) of the bid.
- B. At the option of the bidder, the security may be bid bond, certified, treasurer's or cashier's check issued by a responsible bank or trust company. No other type of bid security is acceptable.
Bid Bonds shall be issued by a Surety Company qualified to do business under the laws of the Commonwealth of Massachusetts.
- C. Certified, Treasurer's or Cashier's check shall be made payable to the City of Waltham, Massachusetts.
- D. The bid security shall secure the execution of the Contract and the furnishing of a Performance and Payment Bond by the successful General Bidder.
- E. Should any General Bidder to whom an award is made fail to enter into a contract therefore within five (5) days, Saturdays, Sundays and Legal Holidays, excluded, after notice of award has been mailed to him or fail within such time to furnish a Performance Bond and also a Labor and Materials or Payment Bond as required, the amount so received from such General Bidder through his Bid Bond, Certified, Treasurer's or Cashier's check as bid deposit shall become the property of the City of Waltham, Massachusetts as liquidated damages; provided that the amount of the bid deposit, which becomes the property of the City of Waltham, Massachusetts, shall not in any event exceed the difference between his bid price and the bid price of the next lowest responsible and eligible bidder; and provided further that, in case of death, disability, bona fide clerical error or mechanical error of a substantial nature, or other unforeseen circumstances affecting the General Bidder, his deposit shall be returned to him.

1.07 BID FORM

- A. General Bids shall be submitted on the "FORM FOR GENERAL BID" enclosed. Erasures or other changes must be explained or noted over the signature of the bidder.
- B. Bid forms must be completely filled in. Bids which are incomplete, conditional, or obscure, or which contain additions not called for will be rejected.
- C. General Bidders shall submit one set of executed bid forms to the Awarding Authority.

1.08 SUBMISSION OF BIDS AND BID SECURITIES

- A. Each bid submitted by a General Contractor shall be enclosed in a sealed envelope that shall be placed with the bid security in an outer envelope. The outer envelope shall be sealed and clearly marked as follows:

(Firm Name): _____
General Bid and Bid Security for:
Gymnasium and Auditorium Restoration at
South Middle School

1.09 AWARD OF CONTRACT

- A. The Contract shall be awarded to the lowest responsible and eligible General Bidder on the basis of competitive bids in accordance with the procedure set forth in the provision of Section 44B-44L inclusive, as amended or inserted, of Chapter 149 of the General Laws of the Commonwealth of Massachusetts.
- B. If the bidder selected as the General Contractor fails to perform his agreement to execute a contract in accordance with the terms of his General Bid, and furnish a Performance Bond and also a Labor and Materials or Payment Bond, as stated in his General Bid in accordance with Section 44F, an award shall be made to the next lowest responsible and eligible bidder.
- C. The words "lowest responsible and eligible bidder" shall be the bidder whose name is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work and who shall certify 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. Essential information in regard to such qualifications shall be submitted in such form as the Awarding Authority may require.
- D. Action on the award will be taken within thirty (30) days, Saturdays, Sundays and Legal Holidays excluded after the opening of the bids.

1.10 SECURITY FOR FAITHFUL PERFORMANCE

- A. The successful bidder must deliver to the Awarding Authority simultaneously with his delivery of the executed contract, an executed Performance Bond, and also a Labor and materials or Payment Bond, each issued by 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 One Hundred Percent (100%) of the Contract Price, as surety for the faithful performance of his contract, and

for the payment of all persons performing labor or furnishing materials in connection therewith. Said bonds shall provide that, if the General Contractor fails or refuses to complete the Contract, the Surety Company will be obligated to do so.

- B. Premiums are to be paid by the General Contractor, and are to be included in the Contract Price.

1.12 PRE-BID WALK-THRU

- A. A pre-bid conference will be held at the site on Wednesday, November 2, 2011, at 10:30 A.M. at South Middle School, 510 Moody Street, Waltham, MA. Interested parties are encouraged to attend given that this will be the only time the building is open prior to the submission of bids. Further, prior to the bid opening, potential bidders may not go onto the site any time other than the aforementioned pre-bid conference.

1.13 SITE VISITS

- A. Prospective bidders are prohibited from going onto the site prior to the Bid Opening or any time other than the pre-bid walk-thru, as set forth in Section 1.12 above, unless authorized by the Architect in an Addendum to the bid documents.

1.14 CONTRACT DOCUMENTS

- A. The Awarding Authority or Architect will, upon deposit of \$100.00, furnish one complete set of Plans and Specifications to each person requesting the same. No partial sets of Contract Documents will be issued. Plans and Specifications must be returned in good condition within thirty (30) days of the bid opening in order for the deposit to be returned. No plans will be mailed.

1.15 EQUALITY

- A. Except where otherwise specifically provided to the contrary, the words "or approved equal" are hereby inserted immediately following the name or description of each article, assembly, system, or any component part thereof in the Contract Documents. It is the Contractor's responsibility to provide all the research and documentation that would prove a product or assembly is "equal". Failure to provide research or documentation does not alleviate the Contractor's responsibility to meet the schedule.

1.16 TAX FREE NUMBER

- A. The City of Waltham has a tax-free number.

1.17 SCHEDULE

- A. The work of the Contract shall be Substantially Complete in 90 calendar days after the date of commencement.

1.18 LATE FEES

- A. If the work is not Substantially Complete as specified in 1.17, the Contractor shall be charged a maximum of Five Hundred Dollars (\$500.00) per day to pay for consulting and testing fees required to manage and arrange for the completion of the project. Late fees will be deducted from the Contract via Change Order.

1.19 WEEKLY JOB MEETINGS

- A. There will be a weekly job meeting at the site on the same agreed-upon day and time. Time will be provided to discuss and view the progress of the work and to answer questions. The Contractor's job Superintendent and Project Manager shall attend each meeting. The City reserves the right to have job meetings conducted in the Planning Department at 119 School Street, Waltham.

1.20 PROJECT SUPERINTENDENT

- A. The Contractor shall provide the same person as Superintendent for the entire duration of the project. Failure to maintain the same person in this position shall result in a One Thousand Dollar (\$1,000.00) penalty per incident which shall cover the Architect's time to re-orient new personnel.

1.21 AWARD

- A. The Awarding Authority reserves the right to reject any or all bids if it be in the public interest to do so, and to act upon the bids and make its award in any lawful manner.

1.22 MINIMUM WAGE SCHEDULE

- A. Bids shall be made on the basis of the Minimum Wage Schedule, as determined by the Commissioner of Labor and Industries, pursuant to the provision of Chapter 149, Section 26 to 27D inclusive, of the Massachusetts General Laws.

1.23 CONFLICT OF INTEREST

- A. A bidder filing a proposal thereby certifies that the proposal is made in good faith, without fraud, collusion, or connection of any kind with any other bidder for the same work, and that the bidder is competing solely on its own behalf without connection with, or obligation to, any undisclosed person or firm.

1.24 PROCEED ORDERS

- A. No bidder is to proceed without a proceed order as set out in the contract.

1.25 STAGING

- A. The General Contractor shall provide all the vertical access (which includes staging, vertical lifts, etc.) for the work of the Contract over 8'-0" high for the General Bidder and his/her File Sub-Bidders.

1.26 COMPLIANCE WITH MASSACHUSETTS GENERAL LAWS

- A. Before a contract may be executed by the City, the successful Bidder will be required, in accordance with the provisions of M.G.L. Chapter 62C, Section 49A, to execute and file with the City the following certificate:
- B. Pursuant to Massachusetts General Laws, Chapter 62C, Section 49A, I certify under the penalty of perjury that I, to the best of my knowledge and belief have filed all state tax returns and paid all the state taxes required under law.

1.27 CONSTRUCTION BARRICADES

- A. The General Contractor shall provide all barricades to enclose the work area to prevent unauthorized access to the site.
 - 1. The barricades shall provide enough room for all construction activities to be performed while separated from pedestrians, students, and staff on site.

2. Safety is the sole responsibility of the Contractor and any barricades necessary to protect the work and the public shall be provided.
3. Provide entrance tunnel protection.

1.28 INSURANCE

- A. The contractor shall purchase and maintain, at his expense all insurance required by the Contract. Documents and all insurance required by the applicable laws of Massachusetts, including but not limited to, General Laws, Chapter 146, in connection with all hoisting equipment.
- B. The Contractor shall purchase and maintain such insurance as will protect him from claims under workmen's compensation acts and from claims for damages because of bodily injury, including death and all property damage including, without limitation, damage to buildings and adjoining the site of construction which might arise from and during operations under this contract, whether such operations be by himself or by any subcontractor or anyone directly or indirectly employed by either of them including:
 1. Statutory Worker's Compensation and Employer's Liability
The contractor shall provide insurance for the payment of compensation and the furnishing of other benefits under Chapter 152 of the General Laws (so-called Worker's Compensation Act) to all persons to be employed under this contract and shall continue in force such insurance as aforesaid shall be deemed a material breach of this Contract and shall operate as an immediate termination thereof. The contractor shall, without limiting the generality of the foregoing, conform to the provisions of Section 34A of Chapter 149 of the General Laws, which Section is incorporated herein by reference and made a part of hereof.
 2. Comprehensive General Liability Insurance
Minimum bodily injury limits of \$ 500,000 per person and \$ 1,000,000 per accident, and property damage limits of \$ 500,000 per accident and \$ 1,000,000 aggregate during any 12 month period, shall include the following:
 - a. Public liability (bodily injury and property damage)
 - b. X.C.U. (explosion, collapse, and underground utilities)
 - c. Independent contractor's protective liability.
 - d. Products and completed operations.
 - e. Save harmless agreement for Owner and Architects set forth in ARTICLE 10.11 of the GENERAL CONDITIONS.
 3. Comprehensive All Risk Motor Vehicle Liability Insurance
Minimum bodily injury limits of \$ 500,000 per person, \$ 1,000,000 per accident, and property damage limit of \$ 1,000,000 per accident.
 4. All Risk Insurance
Covering all Contractor's equipment with a provision for Waiver of Subrogation against the Owner.
 5. Excess Liability Insurance in Umbrella Form with combined Bodily Injury and Property Damage Limit of \$ 1,000,000.

- 6. City of Waltham and CBI Consulting Inc. shall be listed as NAMED Additional Insured with a Waiver of Subrogation on the insurance policy for this project.

1.29 SITE ACCESS

- A. The General Contractor shall gain access to the site via routes approved by the Owner.
 - 1. The General Contractor as part of the bid price will restore all roads, curbs, driveways, walks and grassed or landscaped areas damaged during construction.

1.30 CONSTRUCTION TRAILER

- A. The General Contractor shall locate the construction trailer at locations approved by the Owner.
- B. The General Contractor shall locate all on site stored or staged materials within the enclosed area designated by the Owner.

1.31 BUILDING PERMIT FEES

- A. Building permit fees will not be waived for this project.

1.32 COMPLETE BID FORMS

- A Please Note: Each bidder must fill in all the blanks on all the bid forms, even if the information is “zero dollars” or “not applicable”. Also, please acknowledge all Addenda even if they do not pertain to your trade.

Signature of Individual or Corporate Name

By:

(Signature of Corporate Officer if applicable)

Title: _____

Federal Identification Number: _____

END OF SECTION

**GYMNASIUM AND AUDITORIUM RESTORATION AT
SOUTH MIDDLE SCHOOL
WALTHAM, MASSACHUSETTS**

General Bid Opening Date: 10:30 am, November 16, 2011

J. Pedulla, Purchasing Agent
City of Waltham
610 Main Street
Waltham, MA 02452

A. Basic Price

The undersigned:

(Please type or print the business name of the bidding firm)

having visited the site of the above project and having familiarized myself with the local conditions affecting the cost of the work and with the contract documents, including Amendments and Addenda No's. _____, hereby proposes to furnish all labor, materials, tools, equipment, insurance, permits and taxes, and to do and lawfully perform all things as provided in the specifications, all in accordance with the contract documents, for the sum of:

Base Bid (in words) _____ Dollars, \$ _____

B. The subdivision of the proposed contract price is as follows:

Item 1. The work of the General Contractor, being all work other than that covered by Item 2. \$ _____

Item 2. Sub Bids as follows:

Sub-Trade	Number of Sub-Bidder	Amount	Bonds required indicated by "Yes" or "No"
<u>Painting</u>	_____	\$ _____	_____
<u>Electrical</u>	_____	\$ _____	_____
Total of Item 2		\$ _____	

C. The undersigned agrees that, if s/he is selected as General Contractor, s/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 bid and furnish a performance bond and also a labor and materials or payment bond, each issued by 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.

- D. The undersigned certifies that s/he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work and that s/he will comply fully with all laws and regulations applicable to awards made subject to section forty-four A.
- E. The undersigned as Bidder certifies that if this proposal is accepted, s/he will furnish to the City of Waltham with the invoice for the material or equipment supplied two copies of any and all Material Safety Data Sheets applicable to such material or equipment, as required by M.G.L. Chapter 111F, so called "Right to Know Law".
- F. The undersigned certifies under penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. The word "person" shall mean any natural person, joint venture, partnership, corporation, or other business or legal entity.
- G. Substantial Completion
 - 1. The work of the Contract shall be Substantially Completed in **ninety (90) calendar** days from the date of the "Notice to Proceed"
- H. In accordance with M.G.L., the undersigned certifies that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by OSHA that is at least 10 hours in duration at the time the employee begins work and shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

Sincerely,

(Bidder)

(Address of Bidder)

By:

(Title - Owner*, Partner*)

(Seal, if Corporation)

By:

(If Corporation - Name and Office)

* If the business owned by the individual or partnership is conducted under a trade or assumed name, a certified copy of doing business under an assumed name should be annexed.

SECTION 00 31 00 - FORM FOR SUB-BID

INSERT TRADE

**GYMNASIUM AND AUDITORIUM RESTORATION AT
SOUTH MIDDLE SCHOOL
WALTHAM, MASSACHUSETTS**

Sub-Bid Opening Date: 10:30 am, November 9, 2011

To all General Bidders except those hereinafter expressly excluded:

A. The undersigned:

(Please type or print the business name of the bidding firm)

proposes to furnish all labor and materials required for completing, in accordance with the hereinafter described plans, specifications and addenda, all the work specified in Section No's. _____ of the specifications and in any plans specified in such section, prepared by CBI Consulting for Gymnasium and Auditorium Restoration at South Middle School, Waltham, Massachusetts, for the contract sum of

Base Bid (in words) _____ dollars (\$ _____).

B. This sub-bid includes addenda number _____

C. This sub-bid

May be used by any general bidder except:

May only be used by the following general bidders:

(To exclude general bidders, insert "X" in one box only and fill in blank following that box. Do not answer C if no general bidders are excluded.)

D. The undersigned agrees that, if he is selected as sub-bidder, he will, within five days, Saturdays, Sundays and legal holidays excluded, after presentation of a subcontract by the general bidder selected as the General Contractor, execute with such general bidder a subcontract in accordance with the terms of this sub-bid and contingent upon the execution of the general contract, and, if requested to do so in the general bid by such

general bidder, who shall pay the premiums, furnish a performance and payment bond of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Awarding Authority, in the full sum of the subcontract price.

- E. The names of all persons, firms and corporations performing such class of work or part thereof for which the section of the specifications for the sub-trade require a listing in this paragraph (including the undersigned if customarily furnished by persons on his own payroll and in the absence of a contrary provision in the specifications), the name of each such class of work, or part thereof, and the bid price for each such class of work or part thereof are:

<u>NAME</u>	<u>CLASS OF WORK</u>	<u>BID PRICE</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

(Do not give bid price for any class or part thereof furnished by undersigned.)

- F. The undersigned agrees that the above list of bids to the undersigned represents a bona fide bid based on hereinbefore described plans, specifications, and addenda, and that, if the undersigned is awarded the contract, s/he will be used for the work indicated at the amounts stated, if satisfactory to the Awarding Authority.
- G. The undersigned further agrees to be bound to the General Contractor by the terms of the hereinbefore described plans, specifications (including all general conditions stated therein), and addenda, and to assume toward him all the obligations and responsibilities that he, by those documents, assumes toward the Owner.
- H. The undersigned offers the following information as evidence of his qualifications to perform the work as bid upon according to all requirements of the plans and specifications:
1. Have been in business under present business name _____ years.
 2. Have ever failed to complete any work awarded? _____
 3. List three or more recent buildings with names of General Contractor and Architect on which you served as subcontractor for work of similar character as required for the above named buildings:

<u>GENERAL BUILDING</u>	<u>ARCHITECT</u>	<u>AMOUNT OF CONTRACTOR</u>	<u>CONTRACT</u>
_____	_____	_____	_____

4. Bank Reference: _____

- I. 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 and that he will comply fully with the laws and regulations applicable to awards of subcontractors subject to section 44 F of M.G.L. 149.

- J. The undersigned further agrees that, if the undersigned fails to perform his agreement to execute a subcontract with the General Contractor and furnish a performance and payment bond if requested to do so in the general bid by the general bidder, the bid deposit accompanying the copy of this bid filed with the Award Authority shall become and be the property of the Awarding Authority as liquidated damages. The undersigned understands that, if he so executes a subcontract with the General Contractor and furnishes a performance and payment bond, if requested to do so, the bid deposit will be returned within five (5) days after execution of the general contract.

- K. The undersigned represents that this proposal is made in good faith without fraud, collusion or connection of any kind with any other bidder for the same work, that the undersigned is competing solely on his own behalf without connection with, or obligation to, any undisclosed person or corporation, that no other person or corporation has any interest in the profits of the contract, that the undersigned has read the form of contract attached hereto and is fully informed in regard to all provisions thereof and to the plans and specifications therein referred to, and that the undersigned has visited the premises described in said form of contract and made his own examination of the place where the work is to be done and of all conditions pertaining to the work and has made his own estimate and from such examination and estimate makes this proposal.

- L. The Federal Social Security Identification Number of the sub-bidder (the number used on Employer's Quarterly Federal Tax Return, US Treasury Department Form 941) is:

- M. In accordance with M.G.L., the undersigned certifies that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by OSHA that is at least 10 hours in duration at the time the employee

begins work and shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

DATE _____

Sub Bidder _____
(Company Name)

By: _____
Signature of Authorized Representative

Title: _____
(Affix Seal)

Business Address: _____

City and State: _____

Telephone No. _____

SECTION 00 32 00 - PREVAILING WAGE RATE

A. See Attached.



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



DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lt. Governor

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

JOANNE F. GOLDSTEIN
Secretary

HEATHER E. ROWE
Director

Prevailing Wage Rates

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification	Effective Dates and Total Rates								
Construction									
(2 AXLE) DRIVER - EQUIPMENT	08/01/2011	\$46.120	12/01/2011	\$46.780	06/01/2012	\$47.080			
	08/01/2012	\$47.430	12/01/2012	\$48.460					
(3 AXLE) DRIVER - EQUIPMENT	08/01/2011	\$46.190	12/01/2011	\$46.850	06/01/2012	\$47.150			
	08/01/2012	\$47.500	12/01/2012	\$48.530					
(4 & 5 AXLE) DRIVER - EQUIPMENT	08/01/2011	\$46.310	12/01/2011	\$46.970	06/01/2012	\$47.270			
	08/01/2012	\$47.620	12/01/2012	\$48.650					
ADS/SUBMERSIBLE PILOT	08/01/2011	\$107.800							
AIR TRACK OPERATOR	06/01/2011	\$50.850	12/01/2011	\$52.100					
ASBESTOS REMOVER - PIPE / MECH. EQUIPT.	06/01/2011	\$43.250							
ASPHALT RAKER	06/01/2011	\$50.350	12/01/2011	\$51.600					
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE	06/01/2011	\$61.290	12/01/2011	\$61.920	06/01/2012	\$62.490			
	12/01/2012	\$63.110	06/01/2013	\$63.890	12/01/2013	\$64.670			
BACKHOE/FRONT-END LOADER	06/01/2011	\$61.290	12/01/2011	\$61.920	06/01/2012	\$62.490			
	12/01/2012	\$63.110	06/01/2013	\$63.890	12/01/2013	\$64.670			
BARCO-TYPE JUMPING TAMPER	06/01/2011	\$50.350	12/01/2011	\$51.600					
BLOCK PAVER, RAMMER / CURB SETTER	06/01/2011	\$50.850	12/01/2011	\$52.100					
BOILER MAKER	01/01/2010	\$55.850							
APPRENTICE: BOILERMAKER - Local 29									
Ratio	Step	1	2	3	4	5	6	7	8
1:5	%	65.00	65.00	70.00	75.00	80.00	85.00	90.00	95.00
Apprentice wages shall be no less than the following:									
Step 1\$42.66/2\$42.66/3\$44.54/4\$46.43/5\$48.31/6\$50.20/7\$52.08/8\$53.97									
BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	08/01/2011	\$73.000	02/01/2012	\$73.990					
APPRENTICE: BRICK/PLASTER/CEMENT MASON - Local 3 Waltham									
Ratio	Step	1	2	3	4	5			
1:5	%	50.00	60.00	70.00	80.00	90.00			
Apprentice wages shall be no less than the following:									
Step 1\$49.72/2\$54.38/3\$59.03/4\$63.69/5\$68.34									
BULLDOZER/GRADER/SCRAPER	06/01/2011	\$60.940	12/01/2011	\$61.560	06/01/2012	\$62.120			
	12/01/2012	\$62.740	06/01/2013	\$63.510	12/01/2013	\$64.290			
CAISSON & UNDERPINNING BOTTOM MAN	06/01/2011	\$51.250	12/01/2011	\$52.500					
CAISSON & UNDERPINNING LABORER	06/01/2011	\$50.100	12/01/2011	\$51.350					
CAISSON & UNDERPINNING TOP MAN	06/01/2011	\$50.100	12/01/2011	\$51.350					
CARBIDE CORE DRILL OPERATOR	06/01/2011	\$50.350	12/01/2011	\$51.600					
CARPENTER	09/01/2011	\$57.360	03/01/2012	\$58.480					

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HEATHER E. ROWE
Director

Prevailing Wage Rates

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

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification

Effective Dates and Total Rates

Classification	Ratio	Step	1	2	3	4	5	6	7	8
APPRENTICE: CARPENTER - Zone 2 Eastern MA	1:5	%	50.00	60.00	70.00	75.00	80.00	80.00	90.00	90.00
Apprentice wages shall be no less than the following: Step 1\$27.40/2\$30.60/3\$43.04/4\$44.64/5\$47.81/6\$47.81/7\$52.59/8\$52.59										
CEMENT MASONRY/PLASTERING						08/01/2011	\$70.770	02/01/2012	\$71.540	
CHAIN SAW OPERATOR						06/01/2011	\$50.350	12/01/2011	\$51.600	
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES						06/01/2011	\$62.290	12/01/2011	\$62.920	06/01/2012 \$63.490
						12/01/2012	\$64.110	06/01/2013	\$64.890	12/01/2013 \$65.670
COMPRESSOR OPERATOR						06/01/2011	\$49.910	12/01/2011	\$50.350	06/01/2012 \$50.740
						12/01/2012	\$51.190	06/01/2013	\$51.740	12/01/2013 \$52.290
DELEADER (BRIDGE)						07/01/2011	\$65.410	01/01/2012	\$66.410	07/01/2012 \$67.410
						01/01/2013	\$68.410			
APPRENTICE: PAINTER Local 35 - BRIDGES/TANKS	1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00
Apprentice wages shall be no less than the following: Steps are 750 hrs. Step 1\$29.31/2\$34.57/3\$37.00/4\$39.43/5\$50.35/6\$52.75/7\$55.18/8\$60.05										
DEMO: ADZEMAN						06/01/2011	\$50.100	12/01/2011	\$51.350	
DEMO: BACKHOE/LOADER/HAMMER OPERATOR						06/01/2011	\$51.100	12/01/2011	\$52.350	
APPRENTICE: LABORER Demo Backhoe/Loader/Hammer Operator	1:5	%	60.00	70.00	80.00	90.00				
Apprentice wages shall be no less than the following: Step 1\$38.28/2\$41.49/3\$44.69/4\$47.90										
DEMO: BURNERS						06/01/2011	\$50.850	12/01/2011	\$52.100	
APPRENTICE: LABORER Demo Burners	1:5	%	60.00	70.00	80.00	90.00				
Apprentice Wages shall be no less than the following: Step 1\$38.13/2\$41.31/3\$44.49/4\$47.67										
DEMO: CONCRETE CUTTER/SAWYER						06/01/2011	\$51.100	12/01/2011	\$52.350	
DEMO: JACKHAMMER OPERATOR						06/01/2011	\$50.850	12/01/2011	\$52.100	
DEMO: WRECKING LABORER						06/01/2011	\$50.100	12/01/2011	\$51.350	

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Director

Prevailing Wage Rates

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

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification

Effective Dates and Total Rates

APPRENTICE: LABORER Demo Wrecking Laborer											
Ratio	Step	1	2	3	4						
1:5	%	60.00	70.00	80.00	90.00						
Apprentice wages shall be no less than the following:											
Step 1\$37.68/2\$40.79/3\$43.89/4\$47.00											
DIRECTIONAL DRILL MACHINE OPERATOR						06/01/2011	\$60.940	12/01/2011	\$61.560	06/01/2012	\$62.120
						12/01/2012	\$62.740	06/01/2013	\$63.510	12/01/2013	\$64.290
DIVER						08/01/2011	\$80.270				
DIVER TENDER						08/01/2011	\$65.320				
DIVER TENDER (EFFLUENT)						08/01/2011	\$85.380				
DIVER/SLURRY (EFFLUENT)						08/01/2011	\$107.800				
ELECTRICIAN						09/01/2011	\$68.750	03/01/2012	\$69.240	09/01/2012	\$69.940
						03/01/2013	\$70.680	09/01/2013	\$71.380	03/01/2014	\$72.120
						09/01/2014	\$72.810	03/01/2015	\$73.550	09/01/2015	\$74.540
						03/01/2016	\$75.520				
APPRENTICE: ELECTRICIAN - Local 103											
Ratio	Step	1	2	3	4	5	6	7	8	9	10
2:3***	%	40.00	40.00	45.00	45.00	50.00	55.00	60.00	65.00	70.00	75.00
Apprentice wages shall be no less than the following Steps:											
App Prior 1/1/03; 30/35/40/45/50/55/65/70/75/80											
1\$37.56/2\$37.56/3\$42.11/4\$42.11/5\$44.53/6\$46.95/7\$49.36/8\$51.80/9\$54.21/10\$56.64											
ELEVATOR CONSTRUCTOR						01/01/2011	\$66.690	01/01/2012	\$68.190		
APPRENTICE: ELEVATOR CONSTRUCTOR - Local 4											
Ratio	Step	1	2	3	4	5					
1:1	%	50.00	55.00	65.00	70.00	80.00					
Apprentice rates shall be no less than the following:											
Steps 1-2 are 6 mos.; Steps 3-5 are 1 year											
Step 1\$34.26/2\$43.76/3\$48.86/4\$51.41/5\$56.50											
ELEVATOR CONSTRUCTOR HELPER						01/01/2011	\$52.830	01/01/2012	\$54.330		
FENCE & GUARD RAIL ERECTOR						06/01/2011	\$50.350	12/01/2011	\$51.600		
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY						05/01/2011	\$59.380				
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY						05/01/2011	\$60.770				
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY						05/01/2011	\$42.930				
FIRE ALARM INSTALLER						09/01/2011	\$68.750	03/01/2012	\$69.240	09/01/2012	\$69.940
						03/01/2013	\$70.680	09/01/2013	\$71.380	03/01/2014	\$72.120
						09/01/2014	\$72.810	03/01/2015	\$73.550	09/01/2015	\$74.540
						03/01/2016	\$75.520				

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Lt. Governor

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

JOANNE F. GOLDSTEIN
Secretary

HEATHER E. ROWE
Director

Prevailing Wage Rates

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification	Effective Dates and Total Rates									
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING	09/01/2011	\$56.640	03/01/2012	\$57.010	09/01/2012	\$57.540				
	03/01/2013	\$58.090	09/01/2013	\$58.620	03/01/2014	\$59.180				
	09/01/2014	\$59.690	03/01/2015	\$60.240	09/01/2015	\$60.980				
	03/01/2016	\$61.720								
FIREMAN (ASST. ENGINEER)	06/01/2011	\$55.100	12/01/2011	\$55.630	06/01/2012	\$56.100				
	12/01/2012	\$56.630	06/01/2013	\$57.280	12/01/2013	\$57.940				
FLAGGER & SIGNALER	06/01/2011	\$39.550	12/01/2011	\$39.550						
FLOORCOVERER	09/01/2011	\$62.360	03/01/2012	\$63.610						
APPRENTICE: FLOORCOVERER - Local 2168 Zone 1										
Ratio	Step	1	2	3	4	5	6	7	8	
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00	
Apprentice rates shall be no less than the following:						Steps are 750 hrs.				
Step 1\$29.57/2\$31.36/3\$42.61/4\$44.41/5\$48.00/6\$49.79/7\$53.38/8\$55.18										
FORK LIFT/CHERRY PICKER	06/01/2011	\$61.290	12/01/2011	\$61.920	06/01/2012	\$62.490				
	12/01/2012	\$63.110	06/01/2013	\$63.890	12/01/2013	\$64.670				
GENERATOR/LIGHTING PLANT/HEATERS	06/01/2011	\$49.910	12/01/2011	\$50.350	06/01/2012	\$50.740				
	12/01/2012	\$51.190	06/01/2013	\$51.740	12/01/2013	\$52.290				
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	07/01/2011	\$54.910	01/01/2012	\$55.910	07/01/2012	\$56.910				
	01/01/2013	\$57.910								
APPRENTICE: GLAZIER - Local 35 Zone 2										
Ratio	Step	1	2	3	4	5	6	7	8	
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00	
Apprentice wages shall be no less than the following:						Steps are 750 hrs.				
Step 1\$24.06/2\$28.79/3\$30.70/4\$32.60/5\$43.00/6\$44.87/7\$46.78/8\$50.60										
HOISTING ENGINEER/CRANES/GRADALLS	06/01/2011	\$61.290	12/01/2011	\$61.920	06/01/2012	\$62.490				
	12/01/2012	\$63.110	06/01/2013	\$63.890	12/01/2013	\$64.670				
APPRENTICE: HOIST/PORT. ENG.- Local 4										
Ratio	Step	1	2	3	4	5	6	7	8	
1:6	%	55.00	60.00	65.00	70.00	75.00	80.00	85.00	90.00	
Apprentice wages shall be no less than the following:										
Step 1\$31.50/2\$45.65/3\$47.61/4\$49.56/5\$51.52/6\$53.47/7\$55.43/8\$57.38										
HVAC (DUCTWORK)	08/01/2011	\$66.740	02/01/2012	\$67.990	08/01/2012	\$69.240				
	02/01/2013	\$70.490								
HVAC (ELECTRICAL CONTROLS)	09/01/2011	\$68.750	03/01/2012	\$69.240	09/01/2012	\$69.940				
	03/01/2013	\$70.680	09/01/2013	\$71.380	03/01/2014	\$72.120				
	09/01/2014	\$72.810	03/01/2015	\$73.550	09/01/2015	\$74.540				
	03/01/2016	\$75.520								

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Prevailing Wage Rates

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

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification	Effective Dates and Total Rates					
HVAC (TESTING AND BALANCING - AIR)	08/01/2011	\$66.740	02/01/2012	\$67.990	08/01/2012	\$69.240
	02/01/2013	\$70.490				
HVAC (TESTING AND BALANCING -WATER)	09/01/2011	\$69.230	03/01/2012	\$69.980	09/01/2012	\$71.230
	03/01/2013	\$72.480				
HVAC MECHANIC	09/01/2011	\$69.230	03/01/2012	\$69.980	09/01/2012	\$71.230
	03/01/2013	\$72.480				
HYDRAULIC DRILLS	06/01/2011	\$50.850	12/01/2011	\$52.100		
INSULATOR (PIPES & TANKS)	09/01/2011	\$62.260	09/01/2012	\$63.660	09/01/2013	\$65.260
	09/01/2014	\$67.260				
APPRENTICE: ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston						
Ratio	Step	1	2	3	4	
1:4	%	50.00	60.00	70.00	80.00	
Apprentice wages shall be no less than the following:				Steps are 1 year		
Step 1\$39.03/2\$43.68/3\$48.32/4\$52.97						
IRONWORKER/WELDER	09/16/2011	\$62.930	03/16/2012	\$63.930	09/16/2012	\$64.930
	03/16/2013	\$66.180				
APPRENTICE: IRONWORKER - Local 7 Boston						
Ratio	Step	1	2	3	4	5 6
**	%	60.00	70.00	75.00	80.00	85.00 90.00
Apprentice wages shall be no less than the following:				** Structural 1:6; Ornamental 1:4		
Step 1\$48.02/2\$51.75/3\$53.61/4\$55.47/5\$57.34/6\$59.20						
JACKHAMMER & PAVING BREAKER OPERATOR	06/01/2011	\$50.350	12/01/2011	\$51.600		
LABORER	06/01/2011	\$50.100	12/01/2011	\$51.350		
APPRENTICE: LABORER - Zone 1						
Ratio	Step	1	2	3	4	
1:5	%	60.00	70.00	80.00	90.00	
Apprentice wages shall be no less than the following:						
Step 1\$37.68/2\$40.79/3\$43.89/4\$47.00						
LABORER: CARPENTER TENDER	06/01/2011	\$50.100	12/01/2011	\$51.350		
LABORER: CEMENT FINISHER TENDER	06/01/2011	\$50.100	12/01/2011	\$51.350		
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER	06/01/2011	\$50.100	12/01/2011	\$51.350		
LABORER: MASON TENDER	06/01/2011	\$50.350	12/01/2011	\$51.600		
LABORER: MULTI-TRADE TENDER	06/01/2011	\$50.100	12/01/2011	\$51.350		
LABORER: TREE REMOVER	06/01/2011	\$50.100	12/01/2011	\$51.350		
This classification applies to the wholesale removal of standing trees including all associated trimming of branches and limbs, and applies to the removal of branches at locations not on or around utility lines.						
LASER BEAM OPERATOR	06/01/2011	\$50.350	12/01/2011	\$51.600		
MARBLE & TILE FINISHERS	08/01/2011	\$60.950	02/01/2012	\$61.740		

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HEATHER E. ROWE
Director

Prevailing Wage Rates

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification

Effective Dates and Total Rates

APPRENTICE: MARBLE & TILE FINISHER - Local 3 Marble & Tile										
Ratio	Step	1	2	3	4	5				
1:3	%	50.00	60.00	70.00	80.00	90.00				
Apprentice wages shall be no less than the following:						Steps are 800 hrs.				
Step 1\$43.19/2\$46.74/3\$50.29/4\$53.85/5\$57.40										
MARBLE MASONS, TILELAYERS & TERRAZZO MECH					08/01/2011	\$73.040	02/01/2012	\$74.030		
APPRENTICE: MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile										
Ratio	Step	1	2	3	4	5				
1:3	%	50.00	60.00	70.00	80.00	90.00				
Apprentice wages shall be no less than the following:						Steps are 800 hrs.				
Step 1\$49.74/2\$54.40/3\$59.06/4\$63.72/5\$68.38										
MECH. SWEEPER OPERATOR (NON-CONSTRUCTION)					07/01/2011	\$30.290				
MECH. SWEEPER OPERATOR (ON CONST. SITES)					06/01/2011	\$60.940	12/01/2011	\$61.560	06/01/2012	\$62.120
					12/01/2012	\$62.740	06/01/2013	\$63.510	12/01/2013	\$64.290
MECHANICS MAINTENANCE					06/01/2011	\$60.940	12/01/2011	\$61.560	06/01/2012	\$62.120
					12/01/2012	\$62.740	06/01/2013	\$63.510	12/01/2013	\$64.290
MILLWRIGHT (Zone 1)					04/01/2011	\$57.850				
APPRENTICE: MILLWRIGHT - Local 1121 Zone 1										
Ratio	Step	1	2	3	4	5	6	7	8	
1:5	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00	
Apprentice wages shall be no less than the following:						Steps are 800 hrs.				
Step 1\$37.10/2\$38.77/3\$42.04/4\$43.72/5\$46.19/6\$47.87/7\$50.35/8\$52.02										
MORTAR MIXER					06/01/2011	\$50.350	12/01/2011	\$51.600		
OILER (OTHER THAN TRUCK CRANES, GRADALLS)					06/01/2011	\$43.340	12/01/2011	\$43.680	06/01/2012	\$43.960
					12/01/2012	\$44.300	06/01/2013	\$44.720	12/01/2013	\$45.140
OILER (TRUCK CRANES, GRADALLS)					06/01/2011	\$46.520	12/01/2011	\$46.910	06/01/2012	\$47.250
					12/01/2012	\$47.640	06/01/2013	\$48.120	12/01/2013	\$48.610
OTHER POWER DRIVEN EQUIPMENT - CLASS II					06/01/2011	\$60.940	12/01/2011	\$61.560	06/01/2012	\$62.120
					12/01/2012	\$62.740	06/01/2013	\$63.510	12/01/2013	\$64.290
PAINTER (BRIDGES/TANKS)					07/01/2011	\$65.410	01/01/2012	\$66.410	07/01/2012	\$67.410
					01/01/2013	\$68.410				
APPRENTICE: PAINTER Local 35 - BRIDGES/TANKS										
Ratio	Step	1	2	3	4	5	6	7	8	
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00	
Apprentice wages shall be no less than the following:						Steps are 750 hrs.				
Step 1\$29.31/2\$34.57/3\$37.00/4\$39.43/5\$50.35/6\$52.75/7\$55.18/8\$60.05										

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

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



DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lt. Governor

JOANNE F. GOLDSTEIN
Secretary

HEATHER E. ROWE
Director

Prevailing Wage Rates

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

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification	Effective Dates and Total Rates							
PAINTER (SPRAY OR SANDBLAST, NEW) *	07/01/2011	\$56.310	01/01/2012	\$57.310	07/01/2012	\$58.310		
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.	01/01/2013	\$59.310						
APPRENTICE: PAINTER Local 35 Zone 2 - Spray/Sandblast - New								
Ratio Step	1	2	3	4	5	6	7	8
1:1 %	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00
Apprentice wages shall be no less than the following:								
Step 1\$24.76/2\$29.56/3\$31.54/4\$33.51/5\$43.98/6\$45.92/7\$47.90/8\$51.86								
PAINTER (SPRAY OR SANDBLAST, REPAINT)	07/01/2011	\$54.370	01/01/2012	\$55.370	07/01/2012	\$56.370		
	01/01/2013	\$57.370						
APPRENTICE: PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint								
Ratio Step	1	2	3	4	5	6	7	8
1:1 %	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00
Apprentice wages shall be no less than the following:								
Step 1\$23.79/2\$28.49/3\$30.37/4\$32.25/5\$42.62/6\$44.47/7\$46.35/8\$50.11								
PAINTER (TRAFFIC MARKINGS)	06/01/2011	\$50.100	12/01/2011	\$51.350				
PAINTER / TAPER (BRUSH, NEW) *	07/01/2011	\$54.910	01/01/2012	\$55.910	07/01/2012	\$56.910		
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.	01/01/2013	\$57.910						
APPRENTICE: PAINTER - Local 35 Zone 2 - BRUSH NEW								
Ratio Step	1	2	3	4	5	6	7	8
1:1 %	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00
Apprentice wages shall be no less than the following:								
Step 1\$24.06/2\$28.79/3\$30.70/4\$32.60/5\$43.00/6\$44.87/7\$46.78/8\$50.60								
PAINTER / TAPER (BRUSH, REPAINT)	07/01/2011	\$52.970	01/01/2012	\$53.970	07/01/2012	\$54.970		
	01/01/2013	\$55.970						
APPRENTICE: PAINTER Local 35 Zone 2 - BRUSH REPAINT								
Ratio Step	1	2	3	4	5	6	7	8
1:1 %	50.00	55.00	60.00	65.00	70.00	75.00	80.00	90.00
Apprentice wages shall be no less than the following:								
Step 1\$23.09/2\$27.72/3\$29.53/4\$31.34/5\$41.64/6\$43.42/7\$45.23/8\$48.85								
PANEL & PICKUP TRUCKS DRIVER	08/01/2011	\$45.950	12/01/2011	\$46.610	06/01/2012	\$46.910		
	08/01/2012	\$47.260	12/01/2012	\$48.290				
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)	08/01/2011	\$65.320						
PILE DRIVER	08/01/2011	\$65.320						

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Lt. Governor

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

HEATHER E. ROWE
Director

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification

Effective Dates and Total Rates

Classification	Effective Dates	Total Rates
APPRENTICE: PILE DRIVER - Local 56 Zone 1		
Ratio Step 1 2 3 4 5 6 7 8		
1:3 % 60.00 65.00 70.00 75.00 80.00 85.00 90.00 95.00		
Apprentice wages shall be no less than the following: Step 1\$49.27/2\$51.28/3\$53.28/4\$55.29/5\$57.30/6\$59.30/7\$61.31/8\$63.31		
PIPEFITTER & STEAMFITTER	09/01/2011 03/01/2012 09/01/2012	\$69.230 \$69.980 \$71.230 \$72.480
APPRENTICE: PIPEFITTER - Local 537		
Ratio Step 1 2 3 4 5		
** % 40.00 45.00 60.00 70.00 80.00		
Apprentice Rates-Step1\$33.69/2\$43.88/3\$50.79/4\$55.40/5\$60.01 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)		
PIPELAYER	06/01/2011 12/01/2011	\$50.350 \$51.600
PLUMBERS & GASFITTERS	09/01/2011 03/01/2012 09/01/2012	\$68.620 \$69.420 \$70.670 \$71.920
APPRENTICE: PLUMBER - Local 12		
Ratio Step 1 2 3 4 5		
** % 35.00 40.00 55.00 65.00 75.00		
Apprentice wages shall be no less than the following: Step 1\$30.39/2\$33.33/3\$42.16/4\$48.04/ 4w/lic\$51.07/		
PNEUMATIC CONTROLS (TEMP.)	09/01/2011 03/01/2012 09/01/2012	\$69.230 \$69.980 \$71.230 \$72.480
PNEUMATIC DRILL/TOOL OPERATOR	06/01/2011 12/01/2011	\$50.350 \$51.600
POWDERMAN & BLASTER	06/01/2011	\$51.100 \$52.350
POWER SHOVEL/DERRICK/TRENCHING MACHINE	06/01/2011 12/01/2011 06/01/2012 12/01/2013	\$61.290 \$61.920 \$62.490 \$63.110 \$63.890 \$64.670
PUMP OPERATOR (CONCRETE)	06/01/2011 12/01/2011 06/01/2012 12/01/2013	\$61.290 \$61.920 \$62.490 \$63.110 \$63.890 \$64.670
PUMP OPERATOR (DEWATERING, OTHER)	06/01/2011 12/01/2011 06/01/2012 12/01/2013	\$49.910 \$50.740 \$52.290 \$51.190 \$51.740 \$52.290
READY-MIX CONCRETE DRIVER	05/01/2011	\$41.690
RECLAIMERS	06/01/2011 12/01/2012 06/01/2013	\$60.940 \$62.740 \$63.510 \$61.560 \$62.120 \$64.290
RESIDENTIAL WOOD FRAME (All Other Work)	04/01/2011	\$48.420
RESIDENTIAL WOOD FRAME CARPENTER **	05/01/2011	\$36.810

** The Residential Wood Frame Carpenter classification applies only to the construction of new, wood frame residences that do not exceed four stories including the basement.

As of 9/1/09 Carpentry work on wood-frame residential WEATHERIZATION projects shall be paid the RESIDENTIAL WOOD FRAME CARPENTER rate.

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Prevailing Wage Rates

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

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification

Effective Dates and Total Rates

APPRENTICE: CARPENTER (Residential Wood Frame) - Zone 2										
Ratio	Step	1	2	3	4	5	6	7	8	
1:5	%	60.00	60.00	65.00	70.00	75.00	80.00	85.00	90.00	
Apprentice wages shall be no less than the following:										
Step 1\$20.88/2\$27.11/3\$28.33/4\$29.54/5\$30.75/6\$31.96/7\$33.17/8\$34.39										
RIDE-ON MOTORIZED BUGGY OPERATOR						06/01/2011	\$50.350	12/01/2011	\$51.600	
ROLLER/SPREADER/MULCHING MACHINE						06/01/2011	\$60.940	12/01/2011	\$61.560	06/01/2012 \$62.120
						12/01/2012	\$62.740	06/01/2013	\$63.510	12/01/2013 \$64.290
ROOFER (Inc.Roofer Waterproofing & Roofer Damproofg)						08/01/2011	\$55.860	02/01/2012	\$56.860	08/01/2012 \$57.860
						02/01/2013	\$58.860			
APPRENTICE: ROOFER - Local 33										
Ratio	Step	1	2	3	4	5				
**	%	50.00	60.00	65.00	75.00	85.00				
** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1						Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.				
Apprentice rates no less than: Step 1\$31.21/2\$41.64/3\$43.41/4\$46.97/5\$50.53										
ROOFER SLATE / TILE / PRECAST CONCRETE						08/01/2011	\$56.110	02/01/2012	\$57.110	08/01/2012 \$58.110
						02/01/2013	\$59.110			
APPRENTICE: ROOFER (Slate/Tile/Precast Concrete) - Local 33										
Ratio	Step	1	2	3	4	5				
**	%	50.00	60.00	65.00	75.00	85.00				
Apprentices wages shall be paid no less than the following:										
Step 1\$31.34/2\$41.79/3\$43.58/4\$47.16/5\$50.74										
SHEETMETAL WORKER						08/01/2011	\$66.740	02/01/2012	\$67.990	08/01/2012 \$69.240
						02/01/2013	\$70.490			
APPRENTICE: SHEET METAL WORKER - Local 17-A										
Ratio	Step	1	2	3	4	5	6	7		
1:4	%	40.00	45.00	50.00	60.00	65.00	75.00	85.00		
Apprentice wages shall be no less than the following:										
Step 1\$29.49/2\$35.19/3\$38.16/4\$43.32/5\$46.03/6\$51.45/7\$56.37										
Steps 1-3 are 1 year; Steps 4-7 are 6 mos.										
SIGN ERECTOR						06/01/2009	\$37.780			
APPRENTICE: SIGN ERECTOR - Local 35 Zone 2										
Ratio	Step	1	2	3	4	5	6	7	8	9
1:1	%	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00	90.00
Apprentice wages shall be no less than the following:										
Step 1\$19.48/2\$23.12/3\$24.36/4\$25.60/5\$30.34/6\$31.58/7\$32.82/8\$34.06/9\$35.30										
SPECIALIZED EARTH MOVING EQUIP < 35 TONS						08/01/2011	\$46.410	12/01/2011	\$47.070	06/01/2012 \$47.370
						08/01/2012	\$47.720	12/01/2012	\$48.750	

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Prevailing Wage Rates

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

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification	Effective Dates and Total Rates																	
SPECIALIZED EARTH MOVING EQUIP > 35 TONS													08/01/2011	\$46.700	12/01/2011	\$47.360	06/01/2012	\$47.660
													08/01/2012	\$48.010	12/01/2012	\$49.040		
SPRINKLER FITTER													09/01/2011	\$71.350	01/01/2012	\$71.500	03/01/2012	\$72.250
													09/01/2012	\$73.250	01/01/2013	\$73.400	03/01/2013	\$74.400
APPRENTICE: SPRINKLER FITTER - Local 550																		
Ratio	Step	1	2	3	4	5	6	7	8	9	10							
1:1	%	40.00	45.00	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00							
Apprentice wages shall be no less than the following steps:																		
1\$36.52/2\$39.11/3\$41.70/4\$44.29/5\$46.88/6\$49.47/7\$52.06/8\$54.65/9\$57.24/10\$59.83																		
STEAM BOILER OPERATOR													06/01/2011	\$60.940	12/01/2011	\$61.560	06/01/2012	\$62.120
													12/01/2012	\$62.740	06/01/2013	\$63.510	12/01/2013	\$64.290
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN													06/01/2011	\$60.940	12/01/2011	\$61.560	06/01/2012	\$62.120
													12/01/2012	\$62.740	06/01/2013	\$63.510	12/01/2013	\$64.290
TELECOMMUNICATION TECHNICIAN													09/01/2011	\$56.640	03/01/2012	\$57.010	09/01/2012	\$57.540
													03/01/2013	\$58.090	09/01/2013	\$58.620	03/01/2014	\$59.180
													09/01/2014	\$59.690	03/01/2015	\$60.240	09/01/2015	\$60.980
													03/01/2016	\$61.720				
APPRENTICE: TELECOMMUNICATION TECHNICIAN - Local 103																		
Ratio	Step	1	2	3	4	5	6	7	8	9	10							
1:1	%	40.00	40.00	45.00	45.00	50.00	55.00	60.00	65.00	70.00	75.00							
Apprentice wages shall be no less than the following:																		
1\$37.23/2\$37.23/3\$38.84/4\$38.84/5\$40.46/6\$42.08/7\$43.70/8\$45.31/9\$46.93/10\$48.56																		
TERRAZZO FINISHERS													08/01/2011	\$71.940	02/01/2012	\$72.930		
APPRENTICE: TERRAZZO FINISHER - Local 3 Marble & Tile																		
Ratio	Step	1	2	3	4	5												
1:3	%	50.00	60.00	70.00	80.00	90.00												
Apprentice wages shall be no less than the following: Steps are 800 hrs.																		
Step 1\$49.19/2\$53.74/3\$58.29/4\$62.84/5\$67.39																		
TEST BORING DRILLER													06/01/2011	\$51.500	12/01/2011	\$52.750		
APPRENTICE: TEST BORING DRILLER (Laborers Foundation & Marine)																		
Ratio	Step	1	2	3	4													
1:3	%	60.00	70.00	80.00	90.00													
Apprentice wages shall be no less than the following:																		
Step 1\$38.58/2\$41.81/3\$45.04/4\$48.27																		
TEST BORING DRILLER HELPER													06/01/2011	\$50.220	12/01/2011	\$51.470		
TEST BORING LABORER													06/01/2011	\$50.100	12/01/2011	\$51.350		

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

HEATHER E. ROWE
Director

Prevailing Wage Rates

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification

Effective Dates and Total Rates

APPRENTICE: TEST BORING LABORER (Laborers Foundation & Marine)									
Ratio	Step	1	2	3	4				
1:3	%	60.00	70.00	80.00	90.00				
Apprentice wages shall be no less than the following:									
Step 1\$37.74/2\$40.83/3\$43.92/4\$47.01									
TRACTORS/PORTABLE STEAM GENERATORS		06/01/2011	\$60.940	12/01/2011	\$61.560	06/01/2012	\$62.120		
		12/01/2012	\$62.740	06/01/2013	\$63.510	12/01/2013	\$64.290		
TRAILERS FOR EARTH MOVING EQUIPMENT		08/01/2011	\$46.990	12/01/2011	\$47.650	06/01/2012	\$47.950		
		08/01/2012	\$48.300	12/01/2012	\$49.490				
TUNNEL WORK - COMPRESSED AIR		06/01/2011	\$62.930	12/01/2011	\$64.180				
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)		06/01/2011	\$64.930	12/01/2011	\$66.180				
TUNNEL WORK - FREE AIR		06/01/2011	\$55.000	12/01/2011	\$56.250				
TUNNEL WORK - FREE AIR (HAZ. WASTE)		06/01/2011	\$57.000	12/01/2011	\$58.250				
VAC-HAUL		08/01/2011	\$46.410	12/01/2011	\$47.070	06/01/2012	\$47.370		
		08/01/2012	\$47.720	12/01/2012	\$48.750				
WAGON DRILL OPERATOR		06/01/2011	\$50.350	12/01/2011	\$51.600				
WASTE WATER PUMP OPERATOR		06/01/2011	\$61.290	12/01/2011	\$61.920	06/01/2012	\$62.490		
		12/01/2012	\$63.110	06/01/2013	\$63.890	12/01/2013	\$64.670		
WATER METER INSTALLER		09/01/2011	\$68.620	03/01/2012	\$69.420	09/01/2012	\$70.670		
		03/01/2013	\$71.920						

Outside Electrical - East

CABLE TECHNICIAN (Power Zone)		08/29/2011	\$35.310						
CABLEMAN (Underground Ducts & Cables)		08/29/2011	\$46.110						
DRIVER / GROUNDMAN CDL		08/29/2011	\$40.830						
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs)		08/29/2011	\$33.050						
EQUIPMENT OPERATOR (Class A CDL)		08/29/2011	\$50.110						
EQUIPMENT OPERATOR (Class B CDL)		08/29/2011	\$43.340						
GROUNDMAN		08/29/2011	\$32.550						
GROUNDMAN -Inexperienced (<2000 Hrs.)		08/29/2011	\$27.790						
JOURNEYMAN LINEMAN		08/29/2011	\$59.620						

APPRENTICE: LINEMAN (Outside Electrical) - East Local 104

Ratio	Step	1	2	3	4	5	6	7
1:2	%	60.00	65.00	70.00	75.00	80.00	85.00	90.00

Apprentice wages shall be no less than the following:

Step 1\$34.59/2\$36.99/3\$39.65/4\$42.30/5\$44.95/6\$47.61/7\$50.76

TELEDATA CABLE SPLICER		07/18/2011	\$32.900	07/16/2012	\$33.300		
TELEDATA LINEMAN/EQUIPMENT OPERATOR		07/18/2011	\$31.330	07/16/2012	\$31.700		

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the "total rates" listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at www.mass.gov/dols or at 617-626-6952. Employees not receiving such rates should report the violation to the Fair Labor Division of the Office of the Attorney General, 100 Cambridge Street, Boston, MA 02108;

Tel: 617-727-3465.



DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lt. Governor

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



JOANNE F. GOLDSTEIN
Secretary

HEATHER E. ROWE
Director

Prevailing Wage Rates

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

Awarding Authority: City of Waltham

Contract Number:

City/Town: WALTHAM

Description of Work: Gymnasium and Auditorium Restoration Works at the Former South Middle School.

Job Location: 510 Moody Street

Classification	Effective Dates and Total Rates			
TELEDATA WIREMAN/INSTALLER/TECHNICIAN	07/18/2011	\$31.330	07/16/2012	\$31.700
TREE TRIMMER	02/01/2009	\$19.010		
This classification applies only to the trimming of branches on and around utility lines.				
TREE TRIMMER GROUNDMAN	02/01/2009	\$17.060		
This classification applies only to the trimming of branches on and around utility lines.				

Additional Apprenticeship 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. Apprenticeship 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) unless otherwise specified.

- * Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof.
- ** 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.

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the "total rates" listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27. Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at www.mass.gov/dols or at 617-626-6952. Employees not receiving such rates should report the violation to the Fair Labor Division of the Office of the Attorney General, 100 Cambridge Street, Boston, MA 02108;

Tel: 617-727-3465.

SECTION 00520

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 2010, by and between the party of the first part, the City of Waltham, Massachusetts, hereinafter called "OWNER," by its MAYOR, and the party of the second part, _____ doing business as (a corporation) (a partnership) (a limited liability company) (a joint venture) (an individual)* located in the (City) (Town)* of _____, County of _____, and State of _____, hereinafter called "CONTRACTOR."

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the project described as follows:

Gymnasium and Auditorium Restoration at the South Middle School

hereinafter called the project, for the sum of _____ Dollars and _____ Cents (\$ _____) and all extra work in connection therewith, under the terms as stated in the General and Supplementary Conditions; and at its own proper cost and expense to furnish superintendence, labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, bailing, shoring, removal, and all other things necessary to complete the said project in accordance with the conditions and prices stated in this document which include all maps, plates, blue prints, and the specifications and contract documents therefore.

The CONTRACTOR hereby agrees to commence work under this contract on or before a date to be fixed in the written Notice to Proceed given by the OWNER to the CONTRACTOR and to fully complete the project within 180 consecutive days of the start date fixed in the Notice to Proceed.

The CONTRACTOR further agrees to pay as liquidated damages the sum of \$ 500.00 for each consecutive calendar day thereafter during which the work has not been fully completed, as provided in the Liquidated Damages paragraph of Section 00800 SUPPLEMENTARY CONDITIONS.

In consideration of the foregoing promises the CITY agrees to pay and the CONTRACTOR agrees to receive as full compensation for everything furnished and done by the CONTRACTOR under this contract, including all work required but not included in the items herein mentioned, and also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulty encountered in the prosecution of the

work, and for all risks of every description connected with the work, and for all expenses incurred by or in consequence of the suspension or discontinuance of the work specified, and for well and faithfully completing the work, and the whole thereof, as herein provided, such prices as are set forth in the accompanying Bid.

It is understood and agreed that the quantities set forth in the Bid are approximate and the actual quantity of work to be done may be more or less, as determined by the ENGINEER. The Contractor agrees that he shall neither have nor assert any claim for or be entitled to any additional compensation for damages or for loss of anticipated profits on work that is eliminated.

The CONTRACTOR shall not discriminate against or exclude any person from participation herein on grounds of race, religion, color, sex, age or national origin; and that it shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, religion, color, sex, age, handicapped status, or national origin.

The CONTRACTOR shall not participate in or cooperate with an international boycott, as defined in Section 999 (b)(3) and (4) of the Internal Revenue Code of 1986, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

Applicable provisions of Massachusetts General Laws and Regulations and/or the United States Code and Code of Federal Regulations govern this Agreement and any provision in violation of the foregoing shall be deemed null, void and of no effect. Where conflict between Code of Federal Regulations and State laws and Regulations exist, the more stringent requirement shall apply.

Subject to G.L. c.149, sec. 39K and/or sec. 39G and G.L. c.30, sec. 39F, as applicable, the OWNER agrees to pay the CONTRACTOR in current funds for the performance of the Agreement, subject to additions and deductions, as provided in Section 00700, GENERAL CONDITIONS, and to make payments on account thereof as provided in Section 00700, GENERAL CONDITIONS.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in six (6) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

AGREED:

FOR THE CONTRACTOR:

Name

Date

FOR THE CITY OF WALTHAM:

MAYOR Jeannette A. McCarthy

Date

Joseph Pedulla, Purchasing Agent

Date

Sandra Tomasello, Director Parks & Recreation

Date

Approved as to Form Only:

By _____
John Cervone, City Solicitor

In accordance with M.G.L. C.44, Section 31C, this is to certify that an appropriation in the amount of this Contract is available.

By _____
Paul Centofanti, City Auditor

PERFORMANCE BOND
CITY OF WALTHAM, MA

KNOW ALL MEN BY THESE PRESENT THAT,

_____ as

principal and _____ as surety, are held and firmly bound unto the CITY OF WALTHAM and to such persons, firms, and corporations, who may furnish materials for or perform labor on the work, construction or improvements contemplated in the Contract hereinafter mentioned, or who may have any suits or claims for injury or damage to persons or property resulting from or arising out of the work done under this Contract, in the

SUM OF _____
DOLLARS (\$ _____)

(lawful money of the United States of America) for the payment whereof the Contractor and the Surety of Sureties bind themselves and their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that is the above burden

_____ heirs, executors, administrators and assigns, shall faithfully perform the Contract WALTHAM: GYMNASIUM AND AUDITORIUM RENOVATIONS, on his part and during the life of any guaranty or warranty, for defective materials and workmanship required under this Contract, and satisfy all claims and demands incurred for the same; and shall fully indemnify and save harmless the City from all cost and damage which it may suffer by reason of failure so to do, and shall fully reimburse and repay the City all outlay and expense which the City may incur in making good any such default, and shall promptly make payment to all persons supplying labor or materials for use in the prosecution of the work provided for in said Contract; and shall indemnify and save harmless the said City, its officers and agents from any and all suits or claims for injury or damage to persons or property resulting from or arising out of the work done under this Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

PROVIDED, HOWEVER, that (except as to the City) no suit, action or proceeding by reason of any default whatever shall be brought on this Bond after two years from the day on which the final payment under the Contract falls due.

AND PROVIDED, that any alterations which may be made in the terms of the Contract or in the work to be done under it, or any assignment, transfer or subletting of any part of the work, or the giving by the City of any extension of time for the performance of the Contract, or any other forbearance on the part of either the City or the Contractor to the other, shall not in any way release the Contractor and the Surety of Sureties, or either or any of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety or Sureties of any such alterations, assignment, transfer, subletting extension or forbearance being hereby waived.

This Bond is made for the use and benefit of all persons, firms, and corporations who may furnish materials, or perform any labor for or on account of said work, construction or improvements, or who may have any suits or claims for injury or damage to persons or property resulting from or arising out of the work done under this Contract, and they and each of them are hereby made obliges hereunder the same as if their own proper names were written herein as such, and they and each of them may sue hereon in their own names for their own use and benefit.

And the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed hereunder, or the Specifications accompanying the same, shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such changes, extension of time, alteration or addition to the terms of the Contract or to the work, or to the Specifications.

IN WITNESS WHEREOF, said Contractor and Surety have hereunto set their respective names this _____ day of _____, 20____

WITNESSES:

	_____	(CONTRACTOR)
		(SEAL)
NAME _____	BY _____	
		(SIGNATURE AND TITLE)
ADDRESS _____	_____	
		(SURETY)
(SEAL)		
NAME _____	BY _____	
		(SIGNATURE AND TITLE)
ADDRESS _____	BY _____	
		(ATTORNEY-IN-FACT)

POWER OF ATTORNEY

Attorneys-in-fact who sign bonds must file with each bond a certified copy of their power of attorney to sign said bonds.

PAYMENT BOND

CITY OF WALTHAM, MA

KNOW ALL MEN BY THESE PRESENT THAT,

_____ as principal and _____ as surety, are held and firmly bound unto the CITY OF WALTHAM and to such persons, firms, and corporations, who may furnish materials for or perform labor on the work, construction or improvements contemplated in the Contract hereinafter mentioned, or who may have any suits or claims for injury or damage to persons or property resulting from or arising out of the work done under this Contract,

in the SUM OF _____ DOLLARS (\$ _____) (lawful money of the United States of America) for the payment whereof the Contractor and the Surety of Sureties bind themselves and their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that is the above burden

heirs, executors, administrators and assigns, shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in the WALTHAM: GYMNASIUM AND AUDITORIUM RENOVATIONS and any authorized extensions or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor performed in such work, whether by subcontractors or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that (except as to the City) no suit, action or proceeding by reason or any default whatever shall be brought on this Bond after two years from the day on which the final payment under the Contract falls due.

AND PROVIDED, that any alterations which may be made in the terms of the Contract or in the work to be done under it, or any assignment, transfer or subletting of any part of the work, or the giving by the City of any extension of time for the performance of the Contract, or any other forbearance on the part of either the City or the Contractor to the other, shall not in any way release the Contractor and the Surety of Sureties, or either or any of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety or Sureties of any such alterations, assignment, transfer, subletting extension or forbearance being hereby waived.

This Bond is made for the use and benefit of all persons, firms, and corporations who may furnish materials, or perform any labor for or on account of said work, construction or

improvements, or who may have any suits or claims for injury or damage to persons or property resulting from or arising out of the work done under this Contract, and they and each of them are hereby made obligees hereunder the same as if their own proper names were written herein as such, and they and each of them may sue hereon in their own names for their own use and benefit.

And the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed hereunder, or the Specifications accompanying the same, shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such changes, extension of time, alteration or addition to the terms of the Contract or to the work, or to the Specifications.

IN WITNESS WHEREOF, said Contractor and Surety have hereunto set their respective names this _____ day of _____, 20_____.

WITNESSES:

NAME _____ BY _____
(CONTRACTOR) (SEAL)

ADDRESS _____
(SIGNATURE AND TITLE)

NAME _____ BY _____
(SEAL) (SURETY)

ADDRESS _____ BY _____
(SIGNATURE AND TITLE)

ADDRESS _____ BY _____
(ATTORNEY-IN-FACT)

POWER OF ATTORNEY

Attorneys-in-fact who sign bonds must file with each bond a certified copy of their power of attorney to sign said bonds.

10 HOURS OSHA TRAINING CONFIRMATION

Chapter 306 of the Acts of 2004

CONSTRUCTION PROJECTS

AN ACT RELATIVE TO THE HEALTH AND SAFETY ON PUBLIC

The undersigned hereby certifies that all employees to be employed at a worksite for construction, reconstruction, alteration, remodeling, repair, installation, demolition, maintenance or repair of any public work or any public building estimated to cost more than \$10,000.00 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 payroll report for each employee and will comply with all laws and regulations applicable to awards of subcontracts subject to section 44F.

Company Name: _____

Address: _____

Signature: _____

Title: _____

Print Name _____

See following Chapter 306 of the Acts of 2004

CERTIFICATE OF VOTE OF AUTHORIZATION

Date:

I _____, Clerk of _____ hereby certify that at a meeting of the Board of Directors of said Corporation duly held on the _____ day of _____ at which time a quorum was present and voting throughout, the following vote was duly passed and is now in full force and effect:

VOTED: That _____ (*name*) is hereby authorized, directed and empowered for the name and on behalf of this Corporation to sign, seal with the corporate seal, execute, acknowledge and deliver all contracts and other obligations of this Corporation; the execution of any such contract to be valid and binding upon this Corporation for all purposes, and that this vote shall remain in full force and effect unless and until the same has been altered, amended or revoked by a subsequent vote of such directors and a certificate of such later vote attested by the Clerk of this Corporation.

I further certify that _____ is duly elected/appointed _____ of said corporation

SIGNED:

(Corporate Seal)

Clerk of the Corporation:

Print Name: _____

COMMONWEALTH OF MASSACHUSETTS

County of _____

Date:

Then personally appeared the above named and acknowledged the foregoing instrument to be their free act and deed before me, _____

Notary Public;

My Commission expires: _____

SECTION 0700
GENERAL CONDITIONS

1. INFORMATION

All information shall come from the Office of the City Agent. The Contractor shall inquire at this office for any information needed. Wherever the words “or equal as approved” are used, it is to be understood that the opinion of the City Agent shall govern.

2. SUITS

The Contractor shall assume defense of and shall indemnify and hold the City and its agents harmless from all suits and claims against them arising from the use of any invention, patent right labor or employment, or from any act of omission or neglect of the Contractor, his agents, employees or any subcontractor in performing the work, under this contract.

3. LAWS AND REGULATIONS

The Contractor shall conform to all the applicable rules, regulations, laws and ordinances of the City of Waltham, the United States of America and all agencies having jurisdiction.

4. PROTECTION OF PROPERTY

The Contractor shall take all proper precautions to protect the City’s property from damage and unnecessary inconvenience. Any City property damaged by the Contractor in carrying out the provisions of this contract shall be restored to its original condition, by and at the expense of the Contractor.

5. PROTECTION OF PERSONS

The Contractor shall take all proper precautions to protect persons from injury, unnecessary inconvenience, and shall be responsible for his failure to do so. The Contractor agrees to hold the City harmless from any and all liabilities of every nature and description, which may be suffered through bodily injury, including death, to any person, by reason of negligence of the Contractor, his agents or employees, or any subcontractor.

6. CONTRACT DURATION.

This contract is for the period required to complete the project

7. INSURANCE

WORKMAN’S COMPENSATION: The Contractor shall provide by insurance for the payment of compensation and furnishing of other benefits under Chapter 152 of the General Laws of the Commonwealth of Massachusetts to all persons to be employed under this contract, the premiums for which shall be paid by the Contractor.

COMPREHENSIVE GENERAL LIABILITY

Bodily Injury:	\$1,000,000 Each Occurrence
	\$2,000,000 Aggregate
Property Damage:	\$1,000,000 Each Occurrence
	\$2,000,000 Aggregate

AUTOMOBILE (VEHICLE) LIABILITY

Bodily Injury	\$2,000,000 Each Occurrence
Property Damage	\$1,000,000 Aggregate

UMBRELLA POLICY

General liability

\$2,000,000

The Insurance Certificate, in the description of service box, must read the following:
" *the City of Waltham is named additional named Insurer for General Liability*".

8. LABOR AND MATERIALS BOND

The Contractor agrees to execute and deliver to the City, a Labor and Materials or Payment Bond equal to 100% of the contract value. This contract shall not be in force until said bond has been delivered and accepted by the City. Bond to be issued by a company licensed by the Commonwealth of Massachusetts.

A LETTER FROM A SURETY COMPANY CERTIFYING THAT THE CONTRACTOR IS QUALIFIED AND CAPABLE OF OBTAINING THE ABOVE BONDS MUST BE INCLUDED WITH HIS/HERS BID.

9. PERSONNEL:

The Contractor shall employ a competent supervisor and all properly licensed personnel necessary to perform the services required in this contract. The City Agent shall have the right to require the Contractor to remove and/or replace any of the personnel for nonperformance or for unprofessional behavior. The City Agent may require the Contractor to submit a weekly performance record of the areas and of the work performed, on forms approved by the City Agent. The Contractor or his supervisor shall be available to inspect such work as required by the City Purchasing Agent.

10. PREVAILING WAGES

The Contractor is required to pay the prevailing wages as determined under the provisions of Chapter 149, Sections 26 and 27D of the Massachusetts General Laws, including the submission of weekly payrolls to the awarding authority.

11. MATERIALS

The City or its Agent reserves the right to approve or reject any supplies, material or equipment used by the Contractor. The Contractor agrees to replace any supplies, material or equipment used by the Contractor. The Contractor agrees to replace any rejected supplies, materials or equipment, to the satisfaction of the City or its Agents.

12. TERMINATION OF CONTRACT

This contract may be terminated by the City upon deliverance to the Contractor of a five-day written notice of said termination.

13. CONTRACT OBLIGATIONS

Contract obligations on behalf of the City are subject to an annual appropriation to cover the contract obligation.

14. BIDDER EXPERIENCE EVALUATION

Each bidder shall submit with his bid, all the information relative to their experience and qualifications in performing the work required under this contract and shall have been in business for a minimum of five (5) years, in order for their bid to be considered.

15. NOT-TO-EXCEED AMOUNT

The bid amount proposed in your company's response is a "not-to- Exceed" amount unless the City makes changes, in writing, to the scope of work to be performed. The Change Order must be signed and approved by the City's Purchasing Agent, City Auditor, the Law department and the Mayor PRIOR to the commencement of the change order work. A change order will be priced at the unit price. Failure to comply with this procedure will result in the cancellation of the contract and the non-payment of services provided

16. FINANCIAL STATEMENTS.

The City may require, within five (5) days after the bid opening, a complete and detailed Financial Statement prepared by a Certified Public Account, to determine a bidder's financial stability.

17 BREACH OF CONTRACT/ NON PERFORMANCE

If the Contractor shall provide services in a manner, which is not to the satisfaction of the City, the City may request that the Contractor refurnish services at no additional cost to the City until approved by the City. If the Contractor shall fail to provide services, which are satisfactory to the City, the City in the alternative may make any reasonable purchase or Contract to purchase services in substitution for those due from the Contractor. The City may deduct the cost of any substitute Contract for nonperformance of services together with incidental and consequential damages from the Contract price and shall withhold such damages from sums due or to become due to the Contractor. If the damages sustained by the City exceed sums due or to become due, the Contractor shall pay the difference to the City upon demand. The Contractor shall not be liable for any damages sustained by the City due to the Contractor's failure to furnish services under the terms of this Contract if such failure is in fact caused by the occurrence of a contingency the nonoccurrence of which was a basic assumption under which this Contract was made, including a state of war, embargoes, expropriation of labor strike or any unanticipated federal, state or municipal governmental regulation of order, provided that the Contractor has notified the City in writing of such cause within seven (7) days after its occurrence.

18 RIGHT TO AUDIT

The City of Waltham has the right to review and audit documents related to this contract. This right extends to any subcontractor, supplier or other entity used by the prime contractor to fulfill the obligations under this contract.

19 CHANGE ORDERS

All Change orders, prior to the commencement of the work, must have the approval of the City's Purchasing Agent, the City Auditor, the Law Department and the Mayor. No work is to be done until all written approvals have been obtained.

20 EXISTING BUILDING CONDITIONS

The contractor is herewith notified that the ground floor, 1st and 2d floor of the building as well as the egress stairs and common areas will be occupied during construction. The contractor shall take all precautions and install all protections to safeguard the employees, program participants and visitors to the building at all times. All means and methods are the responsibility of the contractor. The contractor is solely responsible for the safety on the job site.

END OF SECTION

GYMNASIUM AND AUDITORIUM RESTORATION AT
SOUTH MIDDLE SCHOOL
WALTHAM, MASSACHUSETTS
CBI JOB NO.: 11066

CBI Consulting Inc.
Boston, Massachusetts
Tel: (617) 268-8977
Fax: (617) 464-2971

TECHNICAL SPECIFICATIONS

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 01 00

SUMMARY OF WORK

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. In general, the work includes but is not limited to:
 - 1. Auditorium:
 - a. Remove and dispose of carpet.
 - b. Remove existing suspended acoustical tile and exposed "T" ceiling and lighting.
 - c. Repair/patch plaster ceiling and coffered ceiling.
 - d. Paint ceiling.
 - e. Remove walls, suspended acoustical tile and exposed "T" ceiling and lights at stage. Also remove heating unit and ductwork above ceiling. Relocate heat detectors to ceiling of stage. Remove

SUMMARY OF WORK

- kitchen cabinets and counters. Cap off water and drain within adjacent wall and patch wall.
- f. Repair floors, walls, and wood paneling at demolition.
 - g. Patch walls and ceiling at demolition.
 - h. New lighting system at coffers. Relocate track/lighting to the ceiling of the stage.
 - i. New lighting and controls.
 - j. VCT tile flooring at existing ramp.
 - k. Provide all staging and vertical access for access to the work.
 - l. Refinish all wood floors in the scope area.
 - m. Paint walls.
 - n. Clean all existing exposed wood mill work including doors, frames, casing, wainscoting, paneling, large window shutters (all sides), and stage paneling and trim.
 - o. Replace frosted glazing at lower half of windows with clear glass.
 - p. Remove entire level floor platform at balcony including all the framing, blocking, subflooring, underlayment, VCT finish and plaster knee wall with 7" steel joist type studs. Also remove stud and plaster knee walls over each stair. Existing metal railing within to remain. Existing stepped balcony to remain.
 - q. Make balcony access secure by installation of mortised dead bolt lock mechanism and head/floor bolts on doors where noted to restrict access to this unsafe/unfinished area.
 - r. Remove and dispose of loose furniture located in one half of the auditorium floor. See photos.
 - s. Fabricate and install radiator covers, solid oak with perforated metal grille, see photo.
2. Gymnasium:
- a. Remove existing folding wooden bleachers with steel structure.
 - b. New lighting controls.

- c. Paint ceilings, all exposed steel joists, and structural members as well as the entire exposed HVAC system including ducts, diffusers, piping, etc.
 - d. Refinish entire wood floor and install all game lines.
 - e. Paint all existing CMU walls including lower portion that is painted and upper portion that is unpainted.
 - f. Install new mesh divider curtain.
 - g. Install new folding aluminum bleachers (2 sections only).
 - h. Carefully remove existing scoreboard and deliver to the City to a location directed by the City and install a new scoreboard (LED/wireless model).
3. Provide all demolition shown on the plans and as necessary to accomplish all the work of the contract. Please note that all the demolition and patching for the painting and electrical work shall be performed by the painting and electrical File Sub-Bidder.
4. Patching: The General Bidder shall own ALL patching to existing walls, floors and ceilings that are disturbed by any of the demolition activities. Patching shall match existing adjacent materials and finish (including texture).
5. Filed Sub-Bid Demolition includes the demolition of any and all existing building materials, finishes, systems and/or equipment that is required to be removed in order to perform the work of the Filed Sub Bid, including disposal. Patching shall match existing adjacent materials and finish (including texture).
- B. Supply all shoring and protection necessary to protect the building area, building systems, parking areas, and occupants.

1.03 INTENT OF THE PROJECT MANUAL

- A. Whenever “Furnish”, “Install”, or “Provide” is used in the Contract Documents, it shall mean to erect, install, connect, make operative, and supply all labor and materials, including miscellaneous fittings and accessories necessary to complete the installation of the specified item.
- B. All the work of the project is “related” in some fashion either by direct contract, sequencing, or coordination. It is the Contractor’s responsibility to perform all

the work and coordinate all the various trades and types of “related” work in order to meet the schedule and quality standards of the Project.

- C. Means and methods of construction as well as compliance with OSHA and all other safety laws and regulations is the exclusive responsibility of the Contractor, his Subcontractors, suppliers, consultants, and servants. The Architect does not have control of the job site.

1.04 ERRORS, OMISSIONS, AND CONFLICTS IN THE PROJECT MANUAL

- A. In the case of conflicts in the Drawings and the Specifications noticed by the Contractor, CBI shall be notified immediately in writing of such errors and/or omissions. In no case shall the Contractor proceed without written authorization from CBI.

1.05 UNFORESEEN FIELD CONDITIONS

- A. In the case of unforeseen field conditions, the Contractor shall notify the Owner and CBI immediately in writing of such conditions. In no case shall the Contractor proceed without written authorization from CBI. If such unforeseen conditions result in additional expense, the Contractor shall not proceed without the written approval of the Owner.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 04 00

SPECIAL PROJECT PROCEDURES

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 BIDDERS EXAMINATION AND INSPECTION OF EXISTING BUILDING AND SITE

- A. All bidders must inspect the existing site and make their own assessment of the work required to achieve the complete, finished conditions specified in the Contract Documents.
- B. Failure to adequately inspect the site and/or correctly assess existing conditions shall not be cause for additional payment.
- C. Every Contractor will be bound by the scope of work of the Contract Documents and shall make the inspections necessary to assure that the bid price includes the complete scope.

1.03 HOURS OF WORK

- A. Work may commence at 7:00 A.M. and continue until 4:30 P.M., Monday through Friday.

- B. The Contractor shall be completely and fully responsible for the security and safety of the job site at all times.

1.04 CONTRACTOR USE OF THE BUILDINGS, ACCESSIBILITY AND SCHEDULES FOR WORK

- A. The work of the Contractor and all Subcontractors shall be performed during the hours of operation as specified herein and in and around areas of the building and site used while occupied by the Owner and the public. The Contractor shall execute the Work with the least possible disturbance to the use and continuous functioning of the site and building. The Contractor and each Subcontractor take all necessary measures to assure the safety of the staff, visitors, and the general public. The General Contractor is solely responsible for safety on the job site including securing and making safe all construction areas during construction hours as well as during non-construction hours.

- B. Schedule of Work and Site Use

1. The Contractor shall schedule the work of this Contract so as to perform and complete the Work of the Contract according to the following schedule. The Contractor shall within seven (7) days of the Notice of Contract Award, submit a schedule to the Owner and Architect for review.
2. Between the time period of the general bid due date and Construction Commencement, the Contractor shall take all necessary measures to complete the Work of this Contract. It is expected that the Contractor utilize the time period between the bid date and construction start date to schedule and coordinate the work and work sequence, prepare shop drawings and submittals for approval and order materials. The Owner shall issue a Notice to Proceed. If the work is not complete by the completion date, the Contractor will be subject to liquidated damages.
3. The Contractor shall be responsible for providing any and all measures and/or temporary construction required to control the transmission of dust, particles, and fumes from construction activities.
4. The Contractor shall be responsible on a daily basis for informing the designated Owner's representative of all persons on-site that day associated with the Work. The Contractor shall establish a daily reporting system of all activities which is acceptable to the Owner.
5. The Construction schedule shall indicate the dates for start and completion of each work item or task required with all milestones using a Bar Chart subject to approval by the Architect.

6. The Awarding Authority's review of the project construction schedule shall not extend to the accuracy or other matters dealt with in the schedule, including but not limited to whether work is omitted, whether duration of activity is reasonable, the level of labor, materials or equipment, the Contractor's means, methods, techniques, procedures or sequence of construction, or whether the sequence and timing for work remaining are practical. The accuracy, correctness of all work, sequencing, schedules shall remain the sole responsibility of the Contractor. Neither the Awarding Authority's review of a schedule nor a statement of resubmittal not required shall relieve the Contractor for the responsibility for complying with the contract schedule, adhering to sequences of work, or from completing any omitted work with the Contract Time.
7. The Contractor shall provide, erect and maintain barricades with any required egress, access doors, lighting, ventilation, guard rails and all other appurtenances required to protect the general public, visitors, staff, and workers while construction is in progress. Safety is the sole responsibility of the Contractor on the job site.

1.05 HOUSEKEEPING AND PROTECTION OF EXISTING CONDITIONS

- A. Maintain the premises in a safe, orderly condition at all times. Protect construction, furnishings, equipment and other items.
- B. Property Protection: The General Contractor shall take all measures necessary to protect the Owner's property.
- C. Security: The General Contractor shall take every possible precaution to maintain the security of the buildings and site. The Contractor shall cooperate with the Owner fully and follow the Owner's directions as issued. The Contractor shall control and restrict access to areas of work to prevent injury to persons and property.
- D. The Contractor shall properly cover, protect and maintain floor and finished surfaces to prevent damage. Replace protective coverings which become wet, torn or ineffective.
- E. Roof and Finished Surfaces Protection:
 1. The Contractor shall restrict traffic on roofs and finished surfaces to that required to perform the work of this Contract and permit traffic only required to properly complete the Work.

2. Effectively protect surfaces to prevent damages to existing substrates, new finishes, and to finished roofing work. Provide temporary walkways and work platforms as needed.
3. Load distribution: The Contractor and any Subcontractor shall not load or permit any part of the structure to be loaded in any manner that will damage the existing structure or endanger the safety of persons or property. Such loads shall include live and dead loads and all moving, vibratory, temporary and impact loads.

F. Correction by the Contractor

1. At no additional cost to the Owner, the General Contractor shall immediately correct all deficiencies, including damages to the building, site and site surfaces, damages to furnishings, damages to equipment or systems, damage to adjacent properties, and all other damage caused by the General Contractor or its Subcontractors during the execution of the Work of this Contract. Any and all damages resulting from inadequate, insufficient or defective temporary protections installed by the Contractor during the work of this Contract, shall be corrected by the General Contractor at no additional cost to the Owner.

1.06 REQUIREMENTS RELATED TO BUILDING USERS' FURNISHINGS,
EQUIPMENT AND OTHER ITEMS

- A. The General Contractor is responsible for protecting all furnishings, equipment and items from damage (including construction generated dust) during the entire construction period.
- B. The General Contractor shall be responsible for moving and re-setting up all furniture, fixed and movable equipment, file and storage cabinets, recreation equipment, boxes, and all other items to accomplish the work of both the General Contractor and the Subcontractors in its entirety.

1.07 DUST, DIRT, AND FUME CONTROL

- A. The Contractor shall take all necessary precautions and provide all necessary temporary construction to effectively contain dust, dirt and fumes within the areas of work and within the work limits. Temporary construction shall be provided to effectively prevent dust and dirt from entering areas of the buildings or adjacent buildings, satisfying all City, State and Federal laws, codes, and requirements.

1.08 RUBBISH REMOVAL

- A. The Contractor shall remove all rubbish, waste, tools, equipment and appurtenances caused by and used in the execution of the Work; but this shall in no way be construed to relieve the Contractor of his primary responsibility for maintaining the building and Project site clean and free of debris, leaving all work in a clean condition and satisfactory to the Official.
- B. Immediately after unpacking, the Contractor shall collect and remove from the building and Project site all packing materials, case lumber, excelsior, wrapping and other rubbish.
- C. Rubbish removal shall occur so that trash and debris are contained in closed and secured waste containers.

1.09 SITE DRAINAGE AND PUMPING

- A. The Contractor shall be responsible at all times for proper and sufficient site drainage and shall maintain such drainage during the life of the Contract in a manner acceptable to the Owner and so as not to adversely affect the adjacent areas or adjacent properties.
- B. The Contractor shall provide and maintain all pumps, suction and discharge lines, and power in sufficient number and capacity to keep all excavations, pits, trenches, foundations and the entire property area free from accumulation of water from any source whatsoever at all times and under way and all circumstances and contingencies that may arise.

1.10 SNOW AND ICE REMOVAL

- A. The Contractor shall promptly remove all snow and ice which may impede the work, damage the finishes or materials, be detrimental to all/any crafts or trade, or impede trucking, delivery or moving of materials at the site, or prevent adequate drainage of the site or adjoining areas.

1.11 WINTER CONSTRUCTION

- A. The Contractor shall provide protection against damage to materials and work installed in freezing weather, including all special heat and coverings needed to prevent damage by the elements and to complete the work. The ground surface, under footings, under pipe lines, under masonry, under concrete, and other work subject to damage shall be protected against freezing or ice formations.
- B. Refer to SECTION 01 50 00--TEMPORARY FACILITIES, for additional requirements applicable to winter construction.

1.12 BROKEN GLASS

- A. The Contractor shall be held responsible at all times prior to Substantial Completion of the Work, or occupancy by the City, whichever occurs first, for all broken or scratched glass, or glass which had been damaged as a result of the Work, or otherwise. And, when so directed by the Official, the Contractor shall replace at no increase in Contract Price or Contract Time, all such glass broken, missing, or damaged prior to Substantial Completion.

1.13 CLEANING AND POLISHING

- A. The Contractor shall at all times keep the building and Project site free from accumulation of waste materials or rubbish.
- B. Immediately prior to final inspection, the entire building and surrounding Project areas shall be thoroughly cleaned by the Contractor including, without limitation:
1. All construction facilities, tools, equipment, surplus materials, debris and rubbish shall be removed from the Project site and the entire Work shall be left broom clean.
 2. All finished surfaces shall be left in perfect condition, free of stains, spots, marks, dirt, and other defects. The Contractor shall be responsible for the cleaning and polishing of the Work of all trades, whether or not cleaning by such trades is included in their respective Selection of the Specifications.
 3. All glass affected by the work shall be washed and polished on both sides.
 4. All metals, hardware, fixtures, and equipment shall be left in undamaged, bright, polished condition.
 5. Plenums, duct spaces and furred spaces shall be protected at all times from fumes, particles and other air-borne construction effects. These building spaces shall be left clean of debris and decayable materials.
 6. Equipment and building systems located in areas of construction shall be cleaned and tested and made perfectly operational to the satisfaction of the Owner prior to Substantial Completion or partial Substantial Completion of that area of work.
- C. In cleaning items having manufacturer's finish, or items previously finished by a Subcontractor, care shall be taken not to damage such finish. In cleaning glass and finish surfaces, care shall be taken not to use cleaning agents which may stain

or damage any finish materials. Any damage to finishes caused by cleaning operations shall be corrected and repaired by the Contractor at no increase in Contract Price.

1.14 OR-EQUAL

- A. Where materials, equipment, apparatus, or other products are specified by Manufacturer, brand name, type or catalog number, such designation is to establish standards or performance, quality, type and style.
- B. If the General or Subcontractor wishes to use materials or equipment other than these specifically designated herein, as being equal to those so specifically designated, he shall submit the proposed substitution before purchasing and/or fabrication in accordance with the requirement of the General Conditions for approval.
- C. It is the responsibility of the Contractor to submit all back-up material and data needed to prove that the proposed product is an "or-equal". The Architect will not review an alternative product without proper documentation. Alternative products and assemblies will be rejected immediately without proper documentation.
- D. The schedule of the project is not subject to the availability of products submitted as "or approved equal" or the review needed to certify an "or approved equal" product.

1.15 PERMITS AND POLICE DETAILS

- A. The Contractor is responsible for procuring and paying for all applicable permits and police details throughout the entire project.

1.16 COORDINATION

- A. The Contractor shall coordinate locations of all items to be installed with the Architect. If an item is not dimensioned, for height or location, contact the Architect for the installation information. Installation of items without the proper dimensional information may result in reinstallation at no additional charge by the Contractor.

1.17 EXISTING BUILDING

- A. The Contractor is hereby notified that the building as well as the egress stairs and common areas will be occupied during construction. This facility also serves as a Daycare and Community Center. The Contractor shall take all precautions and install all protections to safeguard the lives of staff and visitors to the building.

All means and methods are the responsibility of the Contractor. The Contractor is solely responsible for safety on the job site.

- B. The Contractor shall erect physical dust barriers around the work to eliminate construction dust into the building. There will be a pre-construction walk-thru in advance of the Contractor mobilization to verify the existing conditions of the building, specifically regarding dust. The Contractor shall be completely responsible for all cleaning costs associated with any and all dust generated in the building by the construction, which will be deducted via change order.

1.18 GENERAL NOTES

- A. CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING AND COORDINATING ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS. IN CASE OF CONFLICT, THE ARCHITECT SHALL BE NOTIFIED AND SHALL RESOLVE THE CONFLICT.
- B. IN ANY CASE OF CONFLICT BETWEEN THE DRAWINGS AND THE PROJECT SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
- C. THE CONTRACTOR SHALL MAKE NO DEVIATION FROM DESIGN DRAWINGS WITHOUT PRIOR REVIEW BY THE ARCHITECT.
- D. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
- E. ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND LOCAL LAWS AND REGULATIONS.
- F. GENERAL CONTRACTOR SHALL COORDINATE LOCATIONS OF OPENINGS, PITS, BOXES, SUMPS, TRENCHES, SLEEVES, DEPRESSIONS, GROOVES, AND CHAMFERS, WITH MECHANICAL, ELECTRICAL AND PLUMBING TRADES.
- G. NO PROVISIONS HAVE BEEN MADE FOR CONDITIONS OCCURRING DURING CONSTRUCTION. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE PROPER AND ADEQUATE PROVISIONS FOR STABILITY OF, AND ALL STRESSES TO THE STRUCTURE DUE TO ANY CAUSE DURING CONSTRUCTION.
- H. CONTRACTOR SHALL NOT SCALE DRAWINGS. CONTRACTOR SHALL REQUEST ALL DIMENSIONS OR INFORMATION REQUIRED TO PERFORM THE WORK FROM THE ARCHITECT. WORK COMPLETED

SPECIAL PROJECT PROCEDURES

BY THE CONTRACTOR WITHOUT DIMENSIONS OR INFORMATION SHALL BE DONE AT THEIR OWN RISK AND, IF DEEMED INCORRECT BY THE ARCHITECT, SHALL BE REMOVED AND REINSTALLED TO THE SPECIFICATIONS OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

- I. CODES: THE PROJECT IS BASED ON THE REQUIREMENTS OF THE MASSACHUSETTS STATE BUILDING CODE - EIGHTH EDITION
- J. THE PLANS WERE COMPILED FROM VARIOUS SOURCES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND DIMENSIONS.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 05 00

CONDUCT OF THE WORK

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 PROJECT MANAGEMENT

- A. The Contractor is hereby notified that the building as well as the egress stairs and common areas will be occupied during construction. This facility also serves as a Daycare and Community Center. The Contractor shall take all precautions and install all protections to safeguard the lives of staff and visitors to the building. All means and methods are the responsibility of the Contractor. The Contractor is solely responsible for safety on the job site.
- B. The work must be completed in a continuous uninterrupted operation. The Contractor must use sufficient personnel and adequate equipment to complete all the necessary work requirements within a minimum period of time.
- C. Unless specifically authorized by the Owner, in writing, the work must be conducted between the hours of 7:00 a.m. and 4:30 p.m. on Monday through Friday. No work is to be done on holidays or Sundays unless approved by the Owner in advance.

- D. The Contractor is responsible for the security and stability of partially completed work until the project is accepted by the Owner.

1.03 SHUTDOWN OF SERVICES

- A. If site utility services to the neighborhood are cut by the Contractor, he shall supply all labor, materials or whatever may be required to supply said temporary utility services at no extra cost to the neighborhood and in accordance with the state and local regulations on health and safety, working around the clock, until they are reinstated. The Contractor shall also repair the damaged utility immediately at no cost to the owner.

1.04 COORDINATION

- A. The Contractor shall submit for approval to the Owner a detailed operational plan showing the sequence of operations prior to commencement of any work at the site. Any changes to this operational plan must be approved by the Owner.
- B. The Contractor must retain on the Work during its progress a competent full time representative, satisfactory to the Owner. This representative shall not be changed, except with the consent of the Owner. The representative shall be in full charge of the work and all instructions given to this person by the Architect shall be binding.
- C. The Contractor must supply to the Owner the home telephone number of a responsible person who may be contacted during non-work-hours for emergencies on the Project.

1.05 OWNER'S COOPERATION

- A. The Owner shall assist the Contractor to perform the Work in accordance with the approved operational plan.
- B. The Contractor shall provide:
 - 1. Notification to the Owner two (2) weeks before any work is scheduled at the site/building.
 - 2. Notification to the Owner in writing forty-eight (48) hours before work is scheduled in any particular area.
 - 3. An updated schedule monthly with the application for payment. Payments will not be authorized until the updated schedule is received and approved.

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 09 00

DEFINITIONS & STANDARDS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 DELIVERY AND STORAGE

- A. Materials shall be delivered in their original, unopened containers, clearly labeled with manufacturer's name, brand name, and such identifying numbers as are appropriate.
 - 1. All materials shall be stored flat, or in the case of rolls, standing on end, elevated from the roof or deck, and protected with waterproof covers as necessary to keep the materials dry and protected from sunlight and moisture, and ventilated to prevent excessive temperature.
 - 2. Adhesives, sealants, and mastics shall be stored between 60 and 80 degrees F. Should they be exposed to lower temperatures, restore to room temperatures for 3-5 days prior to use.
 - 3. Flammable materials shall be stored in a cool, dry area away from sparks and open flames.

4. Damaged or deteriorated materials shall not be used and shall be removed from the job site.
5. All cardboard containers shall be stored in dry areas or on pallets.
6. Provide security for all materials and equipment.
7. Protect all material and equipment from damage.

1.03 JOB CONDITIONS

- A. Do not deliver to site or install any material or system that has not been approved. Materials installed without approval may be required to be removed.
- B. Remove only as much existing roofing as can be replaced and made weathertight each day, including all flashing work.
- C. Materials which have a temperature other than the application temperature of the manufacturer shall not be applied.
- D. All surfaces to receive the new materials shall be thoroughly dry. Should surface moisture such as dew exist, the Contractor shall provide the necessary equipment to dry the surface prior to application.
- E. All materials shall be installed according to manufacturer's specifications and shall be compatible with the adjacent materials used.

1.04 DIMENSIONS AND QUANTITIES

- A. All dimensions and quantities shall be determined or verified by the Contractor. The Plans and Details have been compiled from various sources and may not reflect the actual condition at the moment of construction. The Contractor is cautioned to take all precautions and make all investigations necessary to install the proposed work. The Owner will not consider unfamiliarity with the job conditions as a basis for additional compensation.

1.05 MINIMUM REQUIREMENTS

- A. It is the intent of these contract documents to, in some cases, exceed the minimum requirements of the manufacturer. The new work shall be bid and installed as detailed.

GYMNASIUM AND AUDITORIUM RESTORATION AT
SOUTH MIDDLE SCHOOL
WALTHAM, MASSACHUSETTS
CBI JOB NO.: 11066

CBI Consulting Inc.
Boston, Massachusetts
Tel: (617) 268-8977
Fax: (617) 464-2971

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 30 00

SUBMITTALS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.
- E. Consult the individual sections of the specifications for the specific submittals required under those sections and for further details and descriptions of the requirements.

1.02 GENERAL PROCEDURES FOR SUBMITTALS

- A. Timeliness - The Contractor shall transmit each submittal to the Architect sufficiently in advance of performing related Work or other applicable activities so that the installation is not delayed by processing times, including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery, and similar sequenced activities. No extension of time will be authorized because of the Contractor's failure to transmit submittals to the Architect in advance of the Work.
- B. Sequence - The Contractor shall transmit each submittal in a sequence which will not result in the Architect's approval having to be later modified or rescinded by reason of subsequent submittals which should have been processed earlier or concurrently for coordination.

- C. Contractor's Review and Approval - Only submittals received from and bearing the stamp of approval of the Contractor will be considered for review by the Architect. Submittals shall be accompanied by a transmittal notice stating name of Project, date of submittal, "To", "From" (Contractor, Subcontractor, Installer, Manufacturer, Supplier), Specification Section, or Drawing No. to which the submittal refers, purpose (first submittal, resubmittal), description, remarks, distribution record, and signature of transmitter.
- D. Architect's Action - The Architect will review the Contractor's submittals and return them with one of the following actions recorded thereon by appropriate markings:
1. Final Unrestricted Release: Where marked "Approved" the Work covered by the submittal may proceed provided it complies with the requirements of the Contract Documents.
 2. Final-But-Restricted Release: When marked "Approved as Noted" the Work may proceed provided it complies with the Architect's notations or corrections on the submittal and complies with the requirements of the Contract Documents. Acceptance of the Work will depend on these compliances.
 3. Returned for Resubmittal: When marked "Revise and Resubmit" or "Disapproved" the Work covered by the submittal (such as purchasing, fabrication, delivery, or other activity) should not proceed. The submittal should be revised or a new submittal resubmitted without delay (no limit to number of resubmissions), in accordance with the Architect's notations stating the reasons for returning the submittal.
- E. Processing - All costs for printing, preparing, packaging, submitting, resubmitting, and mailing, or delivering submittals required by this contract shall be included in the Contract Sum.

1.03 OR EQUALS

- A. Definition - Whenever a specification section names one or more brands for a given item, and the Contractor wishes to submit, for consideration, another brand, the submission shall be considered an "or-equal" or a "material substitution". For the purposes of this Contract, the terms "or-equal" and "material substitution" shall be considered synonymous.
- B. In no case may an item be furnished on the Work other than the item named or described, unless the Architect, with the Administrator's written concurrence, shall consider the item equal to the item so named or described, as provided by M.G.L. c.30 § 39M.

- C. The equality of items offered as "equal" to items named or described shall be proved to the satisfaction of the Architect, including all research and full documentation, at the expense of the Contractor submitting the substitution.
- D. The Architect and/or the Department may require that full size samples of both the specified and proposed products be submitted for review and evaluation. The Contractor shall bear full cost for providing, delivering, and disposal of all such samples.
- E. The Contractor shall assume full responsibility for the performance of any item submitted as an "Or-Equal" and assume the costs of any changes in any Work which may be caused by such substitution.
- F. Or Equal Approval Process - On the transmittal, or on a separate sheet attached to the submission, the Contractor shall direct attention to any deviations, including minor limitations and variations, from the Contract Documents.
 - 1. The Contractor shall submit to the Architect for consideration of any or-equal substitution a written point-by-point comparison containing the name and full particulars of the proposed product and the product named or described in the Contract Documents.
 - 2. Such submittal shall in no event be made later than 120 calendar days prior to the incorporation of the item into the Work. In any case in which the time period specified in the Contract Documents from the Notice to Proceed to Substantial Completion is less than 120 days, this requirement can be waived by the Architect.
 - 3. Upon receipt of a written request for approval of an or-equal substitution, the Architect shall investigate whether the proposed item shall be considered equal to the item named or described in the Contract Documents. Upon conclusion of the investigation, the Architect shall promptly advise the Contractor that the item is, or is not, considered acceptable as on Or-Equal substitution. Such written notice must have the concurrence of the Administrator.

1.04 SUBMISSION OF SHOP DRAWINGS

- A. Shop Drawings shall be complete, giving all information necessary or requested in the individual section of the specifications. They shall also show all adjoining Work and details of connection thereto, including flashing, waterproofing, and all utilities.

- B. Shop Drawings shall be for whole systems. Partial submissions will not be accepted.
- C. The Architect reserves the right to review and approve shop drawings only after approval of related product data and samples.
- D. Shop drawings shall be properly identified and contain the name of the project, name of the firm submitting the shop drawings, shop drawing number, date of shop drawings and revisions, Contractor's stamp of approval, and sufficient spaces near the title block for the Architect's stamp.
- E. The Contractor shall submit to the Architect one legible, reproducible transparency and two black line prints of each shop drawing. Transparency and prints shall be mailed or delivered in roll form. Each submittal shall be accompanied by a transmittal notice.
- F. When the transparency is returned by the Architect with the stamp "Revise and Resubmit" or "Disapproved", the Contractor shall correct the original drawing or prepare a new drawing and resubmit a transparency and two prints thereof to the Architect for approval. This procedure shall be repeated until the Architect's approval is obtained.
- G. When the transparency is returned by the Architect with the stamp "Approved" or "Approved as Corrected", the Contractor shall provide and distribute the prints for all Contractor and Subcontractors use, and in addition submit, within 10 calendar days after approval, 4 prints to the Architect.
- H. The Contractor shall maintain one full set of approved shop drawings at the site.
- I. Photo copies of the bid documents are not acceptable as shop drawings.

1.05 SUBMISSION OF PRODUCT DATA

- A. The Contractor shall submit 7 copies of Product Data to the Architect. All such data shall be specific and identification of material or equipment submitted shall be clearly marked in ink. Data of general nature will not be accepted.
- B. Product Data shall be accompanied by a transmittal notice. The Contractor's stamp of approval shall appear on the printed information itself, in a location which will not impair legibility.
- C. Product Data returned by the Architect as "Disapproved" shall be resubmitted in 7 copies until the Architects approval is obtained.

- D. When the Product Data are acceptable, the Architect will stamp them "Approved" or "Approved as Corrected", retain 3 copies, and return 4 copies to the Contractor. The Contractor shall provide and distribute additional copies as may be required to complete the Work.
- E. The Contractor shall maintain one full set of approved, original Product Data at the site.
- F. Provide product data for all items to be installed whether or not noted in the specification section.

1.06 SUBMISSION OF SAMPLES

- A. Unless otherwise specified in the individual section, the Contractor shall submit two specimens of each sample.
- B. Samples shall be of adequate size to permit proper evaluation of materials. Where variations in color or in other characteristics are to be expected, samples shall show the maximum range of variation. Materials exceeding the variation of approved samples will not be approved on the Work.
- C. Samples of items of interior finishes shall be submitted all at once to permit a coordinated selection of colors and finishes.
- D. Samples which can be conveniently mailed shall be sent directly to the Architect, accompanied by a transmittal notice. All transmittals shall be stamped with the Contractor's approval stamp of the material submitted.
- E. All other samples shall be delivered at the field office of the Project Representative with sample identification tag attached and properly filled in. Transmittal notice of samples so delivered with the Contractor's stamp of approval shall be mailed to the Architect.
- F. If a sample is rejected by the Architect, a new sample shall be resubmitted in the manner specified hereinabove. This procedure shall be repeated until the sample is approved by the Architect.
- G. Samples will not be returned unless return is requested at the time of submission. The right is reserved to require submission of samples whether or not particular mention is made in the specifications, at no additional cost to the Owner.
- H. Samples shall not be installed as part of the work.

GYMNASIUM AND AUDITORIUM RESTORATION AT
SOUTH MIDDLE SCHOOL
WALTHAM, MASSACHUSETTS
CBI JOB NO.: 11066

CBI Consulting Inc.
Boston, Massachusetts
Tel: (617) 268-8977
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PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 40 00

QUALITY CONTROL

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 INSPECTION AND TESTING

- A. An independent inspector and/or testing laboratory may be engaged and paid for by the Owner to perform the inspection and testing of the new work.
- B. The Contractor shall cooperate with the inspector and/or testing laboratory, furnish materials and labor as may be required and provide for convenient access to all parts of the work for purposes of inspection and testing.
- C. The Contractor shall accept as final the results of all such inspection and testing.
- D. The inspector shall have the authority to delay the commencement of work, or to stop the work at any time, for any reason which he deems necessary.
- E. The inspector and/or testing laboratory reserves the right to require the Contractor to perform removal of materials installed by the Contractor.

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- F. Bear all costs for tests where materials or systems have been found unacceptable and all costs for replacement required due to such unacceptability.
- G. If any replacement work is required, such work will also be subject to the terms of this SPECIFICATION.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 50 00

TEMPORARY FACILITIES

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 GENERAL

- A. The Contractor shall be responsible for providing and maintaining all temporary facilities until Substantial Completion. Removal of such prior to Substantial Completion must be with the concurrence of the Architect. The Contractor bears full responsibility for reprovding any facility removed prior to Substantial Completion.
- B. Removal of all temporary facilities shall be a condition precedent to Substantial Completion unless directed otherwise by the Architect or specifically noted in the specifications.
- C. The Contractor must comply with all safety laws and regulations of the Commonwealth of Massachusetts, the United States Government, and local government agencies applicable to Work under this contract. The Contractor's attention is directed to the Commonwealth of Massachusetts, Department of Labor and Industries Regulation 454 CMR.
- D. Safety is the sole responsibility of the Contractor on the job site. Contractor is notified that the building will be occupied during construction. The Architect does

TEMPORARY FACILITIES

not have control of the job site in any way.

1.03 FIELD OFFICES

- A. Space within the building will be available for meetings during the work.

1.04 TEMPORARY CONSTRUCTION FENCE

- A. The Contractor shall be responsible for providing and maintaining temporary fencing and barricades around the construction as may be necessary to assure the safety of all persons authorized or unauthorized. Such protective measures shall also be located and constructed as required by local, state, and federal ordinances, laws, codes, or regulations.

1.05 TEMPORARY STRUCTURES AND MATERIAL HANDLING

- A. The Contractor shall provide such secure storage sheds, temporary buildings, or trailers as required for the performance of the Contract.
- B. Materials shall be handled, stored, installed, cleaned, and protected in accordance with the best practice in the industry and, except where otherwise specified in the Contract Documents, in accordance with manufacturer's specifications and directions.
- C. The Contractor must obtain the permission of the Owner for the placement of any storage facilities on site, and the Owner assumes no responsibility for articles stored.

1.06 TEMPORARY STAGING, STAIRS, CHUTES

- A. Except as otherwise specified, the General Contractor shall furnish, install, maintain in safe condition, and remove all scaffolds, staging, and planking over 8 ft. in height, required for the use of all trades, except the File Sub-Bidders, for proper execution of the Work, except as noted. The File Sub-Bidder shall provide all their own vertical access to perform all of their work
- B. The Contractor shall furnish, install, maintain in safe condition, and remove all temporary ramps, stairs, ladders, and similar items as required for the use of all trades for the proper execution of the Work.
- C. If the project is new construction permanent stairs shall be erected as soon as possible, for which the Contractor shall provide temporary protective treads, risers, handrails, and shaft protection.
- D. The Contractor shall furnish, install, maintain, and remove covered chutes from the

TEMPORARY FACILITIES

work area. Such shall be in convenient locations and permit disposal of rubbish directly into trucks or disposal units.

- E. Debris shall not be allowed to fall freely from upper levels of the building. Materials shall not be thrown or dropped from open windows or the roof.

1.07 HOISTING FACILITIES

- A. Except as otherwise specified, the Contractor shall provide, operate, and remove material hoists, cranes, and other hoisting as required for the performance of the Work by all trades. All such hoisting service shall be without cost to the Subcontractors. EXCEPTION: The File Sub-Bidders shall provide all their own hoisting to perform all their own work.

1.08 TEMPORARY WATER

- A. The Contractor may make use of the available water supply at the site for construction purposes, provided the permission of the Owner is obtained beforehand and only as long as the water is not used wastefully.
- B. The Contractor shall provide all necessary piping and hoses to utilize the available sources of water.
- C. The Contractor shall provide an adequate supply of cool drinking water with individual drinking cups for personnel on the job.

1.09 TEMPORARY ELECTRICITY

- A. The Contractor may make use of the electricity available at the site, metered and paid for by the Owner, provided that the Contractor shall supply proper adapters and extension cords.
 - 1. Where heavy duty electric equipment drawing current in excess of 15 amperes is involved, the Contractor shall provide temporary service to supply the power.
 - 2. The temporary electric service shall include, but not be limited to labor, materials, and equipment necessary to supply temporary power of adequate capacity for the project.
 - 3. Transformers and meters, when required by the power company, will be furnished by the power company and the Contractor shall pay the costs therefore.
- B. Temporary electrical Work shall be performed under the direct supervision of at

TEMPORARY FACILITIES

least one master electrician, who will be present on the project at all times when such work is being performed.

- C. The Contractor shall furnish, install, and maintain lamps in operating condition. The Contractor, and each Subcontractor, shall furnish their own extension cords and additional lamps as may be required for their work. Temporary work of a special nature, not otherwise specified hereunder, shall be provided, maintained, and paid for the trade requiring same.
- D. All lamps installed in permanent lighting fixtures and used as temporary lights during the construction period shall be removed and replaced shortly before Substantial Completion by the set of lamps required to be provided under the Electrical section of the specifications.
- E. All temporary work shall be provided in conformity with the National Electric Code, State laws, and requirements of the power company. Particular attention is called to Commonwealth of Massachusetts, Department of Labor and Industries Regulation, 454 CMR.

1.10 WEATHER PROTECTION

- A. The Contractor shall provide temporary enclosures and heat to permit work to be carried on during the months of November through March in compliance with MGL c.149 §44G (d). Without limitation this includes such items as excavation, pile driving, steel erection, erection of certain exterior wall panels, masonry, sealants, waterproofing, sheet metal work, roofing, and similar operations.
- B. "Weather Protection" means the temporary protection of that Work adversely affected by moisture, wind, and cold by covering, enclosing, and/or heating. This protection shall provide adequate working areas during the months of November through March as determined by the Owner and consistent with the construction schedule to permit the continuous progress of all Work necessary to maintain an orderly and efficient sequence of construction operations. The Contractor shall furnish and install "Weather Protection" material and be responsible for all costs, including heating required to maintain a minimum of 40 degrees F. at the working surface. This provision does not supersede any specific requirements for methods of construction, curing of materials, or the applicable conditions set forth in the Contract Documents with added regard to performance obligations of the Contractor.
- C. Within 30 calendar days after award of the Contract, the Contractor shall submit in writing, to the Architect for approval, three (3) copies of the proposed methods for "Weather Protection".
- D. The Contractor shall assume the entire responsibility for weather protection during

TEMPORARY FACILITIES

construction (until Substantial Completion), and shall be liable for any damage to any Work caused by failure to supply proper weather protection and proper ventilation.

- E. Work damaged by frost shall be removed and replaced by and at the Contractor's expense and as directed by the Architect.
- F. It is to be specifically understood that the Contractor shall do no work under any conditions deemed unsuitable by the Contractor to the execution of the Work. This provision shall not constitute any waiver, release, or lessening of the Contractor's obligation to bring the Work to Substantial Completion within the period of time set forth in the Contract Documents.

1.11 ACCESS

- A. The Contractor shall allow for the minimal interruption of access and entry to the building with special concerns for maintaining life safety access and egress.

1.12 DEBRIS

- A. The Contractor will be responsible for the removal of all construction debris from the job site.
- B. The Contractor will be allowed to locate a dumpster or rubbish truck on site. All debris shall be chuted or deposited in the dumpster in closed containers.
- C. Material removed from the existing building and not to be re-used shall be treated as required in SELECTIVE DEMOLITION. Debris resulting from the new work shall be stored in containers provided by the Contractor and legally disposed of.

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 51 00

PROTECTION

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 PROTECTION OF PERSONS & PROPERTIES

- A. The Contractor is hereby notified that the building as well as the egress stairs will be occupied during construction. The Contractor shall take all precautions and install all protections to safeguard the lives of staff and visitors to the building. All means and methods are the responsibility of the Contractor. The Contractor is solely responsible for safety on the job site. The architect does not have control of the job site, or means and methods, in any way.
- B. Any damage to buildings, roads, (public and private), concrete walks, bituminous concrete areas, fences, rails, lawn areas, trees, shrubbery, poles, underground utilities, etc. shall be made good by and at the Contractor's own expense, all to the satisfaction of the Owner.
- C. The Contractor shall patch, repair and/or replace all adjacent materials and surfaces damaged after the installation of new work to the complete satisfaction and at no expense to the Owner. All repair and replacement work shall match the existing in kind and appearance.

1.03 TEMPORARY PROTECTION

A. The Contractor shall:

1. Protect excavations, trenches, buildings, and materials at all times from rain water, ground water, backing-up, or leakage of sewers, drains, or other piping, or from water damage of any origin. Provide all pumps, piping, coverings, and other materials and equipment as required by job conditions to accomplish this requirement.
2. In addition to the weather protection during the months of November to March specified elsewhere, provide temporary watertight enclosures for openings in exterior walls and in roof decks when and as required to protect the Work from damage by inclement weather. Temporary enclosures shall be provided with adequate means of ventilation to prevent accumulation of moisture in the buildings.
3. Provide temporary wood doors for exterior entrances and elsewhere when required. Permanent door enclosures shall not be used as temporary enclosures.
4. Protect sills, jambs, and heads of openings through which materials are handled.
5. Protect decks and slabs to receive work by other trades from any soiling which will prevent proper adhesion of subsequent Work. Decks and slabs shall be left clean and free of blemishes at the time other trades begin the application of their work.
6. Protect concrete slabs to remain exposed and finished floors against mechanical damage, plaster droppings, oil, grease, paint, or other material which will stain the floor finish. Install and maintain adequate strips of building paper or other protection on finished floors in rooms where future Work will be done by other trades.
7. Protect all surfaces to receive work by other trades from any soiling which will prevent proper execution of subsequent work
8. Protect other areas, furniture, and private property of the resident and the Owner. Any areas damaged by the Contractor shall be restored to the original condition or compensated at the Contractor's expense.

- B. Finished surfaces shall not be subjected to traffic nor shall they be used for storage of materials. Where some activity must take place in order to carry out the Work, adequate protection must be provided.

- C. After the installation of the Work by any Subcontractor is completed, the Contractor shall be responsible for its protection and for repairing, replacing, or cleaning any such Work which has been damaged by other trades or by any other cause, so that all Work is in first class condition at the time of Substantial Completion.

1.04 ACCESS

- A. The Contractor shall, at all times, leave an unobstructed way along walks and roadways, and shall maintain barriers and lights for the protection of all persons and property in all locations where materials are stored or work is in progress.

1.05 SECURITY

- A. The Contractor shall be responsible for providing all security precautions necessary to protect the Contractor's and Owner's interests.
- B. Where excavation is involved, the Contractor shall be responsible for providing continuous watchmen service as necessary, to insure adequate protection of the general public.

1.06 NOISE AND DUST CONTROL

- A. The Contractor shall take special measures to protect the residents, neighbors, and general public from noise, dust, and other disturbances by:
 - 1. Keeping common pedestrian and vehicular circulation areas clean and unobstructed;
 - 2. Insulating work area from occupied portions as far as possible; and
 - 3. Sealing dust and fumes from contaminating occupied spaces.

1.07 FIRE PROTECTION

- A. The Contractor shall take necessary precautions to insure against fire during construction. The Contractor shall be responsible to insure that the area within contract limits is kept orderly and clean and that combustible rubbish and construction debris is promptly removed from the site.
- B. Installation of equipment suitable for fire protection shall be done as soon as possible after commencement of the Work. The Contractor's attention is directed to the requirements of the Commonwealth of Massachusetts, Department of Labor and Workforce Development Regulation 454 CMR.

1.08 WIND PROTECTION

- A. Should high wind warnings be issued by the U.S. Weather Bureau, the Contractor shall take every precaution to minimize danger to persons, to the Work, and to the adjacent property.

1.09 WEATHER PROTECTION

- A. The Contractor shall provide Weather Protection as required by Specification Section 01 50 00 Temporary Facilities and any other specific requirements of the Contract Documents.

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 52 00

CLEANING UP

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.
- E. Consult the individual sections of the specifications for cleaning of Work installed under those sections.

1.02 CLEANING DURING CONSTRUCTION

- A. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on the site.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into streams or waterways.
- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. Do not allow materials and rubbish to drop free or be thrown from upper floors, but remove by use of a material hoist or rubbish chutes.

- D. Maintain the Site free from accumulations of waste, debris, and rubbish.
- E. Provide on-site containers for collection of waste materials and rubbish.
- F. At the end of each day, remove and legally dispose waste materials and rubbish from site.
- G. Disposal of materials shall be in compliance with all applicable laws, ordinances, codes, and by-laws.

1.03 FINAL CLEANING

- A. Prior to submitting a request to the Architect to certify Substantial Completion of the Work, the Contractor shall inspect all interior and exterior spaces and verify that all waste materials, rubbish, tools, equipment, machinery, and surplus materials have been removed, and that all sight-exposed surfaces are clean. Leave the Project clean and ready for occupancy.
- B. Unless otherwise specified under other sections of the Specifications, the Contractor shall perform final cleaning operations as herein specified prior to final inspection.
- C. Cleaning shall include all surfaces, interior and exterior, which the Contractor has had access to, whether new or existing.
- D. Employ experienced workmen or professional cleaners for final cleaning.
- E. Use only cleaning materials recommended by the manufacturer of the surface to be cleaned.
- F. Use cleaning materials which will not create a hazard to health or property and which will not damage surfaces.
- G. All broken or defective glass caused by the Contractor's Work shall be replaced at the expense of the Contractor.
- H. Remove grease, mastic, adhesive, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight-exposed interior and exterior surfaces. This includes cleaning of the Work of all finishing trades where needed, whether or not cleaning by such trades is included in their respective specifications.
- I. Clean and polish all new and existing glass and plastic glazing (if any) throughout the building(s), on both sides. Clean plastic glazing in accordance with the manufacturer's directions. This cleaning shall be completed by qualified window

cleaners at the expense of the Contractor just prior to acceptance of the Work.

- J. Wash and polish all mirrors.
- K. Repair, patch, and touch up marred surfaces to the specified finish, to match adjacent surfaces.
- L. Polish glossy surfaces to a clear shine.
- M. Do the final cleaning of resilient floors and wood floors as specified under the respective sections of the Specifications.
- N. Leave all architectural metals, hardware, and fixtures in undamaged, polished conditions.
- O. Leave pipe and duct spaces, plenums, furred spaces and the like clean of debris and decayable materials.
- P. In cleaning items with manufacturer's finish or items previously finished by a Subcontractor, care shall be taken not to damage such manufacturer's or Subcontractor's finish. In cleaning glass and finish surfaces, care shall be taken not to use detergents or other cleaning agents that may stain adjoining finish surfaces. Any damage to finishes caused by cleaning operations shall be repaired at the Contractor's expense.
- Q. Broom clean exposed concrete surfaces and paved surfaces. Rake clean other surfaces of grounds.
- R. Ventilating systems - Replace filters and clean ducts, blowers, and coils if units were operated during construction.
- S. Owner's responsibility for cleaning commences at Substantial Completion.

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 70 00

PROJECT CLOSEOUT

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.
- E. Consult the individual sections of the specifications for specific items required under those sections.

1.02 OCCUPANCY PERMIT

- A. The Contractor shall coordinate the efforts of all Subcontractors and obtain the Occupancy Permit from the local Building Department. The Contractor shall pay any and all Building Department fees associated with the Occupancy Permit. Fees are not waived.

1.03 PARTIAL COMPLETION

- A. At the completion of Work the Contractor may notify the Architect that the Work is Partially Complete. The Architect, or a designee, shall conduct a review of the Work. If the building is actively occupied this review shall occur within 24 hours of any written request. The Architect shall prepare a punch list, setting forth in accurate detail any items and additional items that are not acceptable or incomplete. The Contractor shall coordinate all Subcontractors to achieve prompt completion of the punch list.

- B. Prior to requesting Partial Completion the Contractor shall make a thorough inspection of the Work. During this inspection the Contractor shall prepare a comprehensive list of all items remaining to be completed or corrected. This list shall include all remaining Contractor and Subcontractor items to be provided under the Contract Documents.
- C. The Contractor shall not be relieved of the responsibility to provide Contract items left off the Architect's punch list.
- D. If the Architect determines that the Work is not Partially Complete, the Architect shall inform the Contractor of those items that must be completed before the Architect will prepare the punch list. Upon completion of those items, the Contractor shall again request the Architect to prepare a punch list.
- E. If the Contractor fails to request a review that Contractor will be responsible for the condition of the Work even if the building is occupied.
- F. The date of Substantial Completion for the entire contract and the start of all associated warranties shall not occur until all work is complete.
- G. The Architect shall prepare the Certificate of Substantial Completion in accordance with Article 9.6 of the General Conditions after the work is complete.
- H. Partial Payment of retainage shall not be made until at least 65 days after the effective date of the Certificate of Substantial Completion.

1.04 RECORD DRAWINGS

- A. Consult the individual sections of the Specifications for the specific requirements of those sections. In cases of inconsistency the more stringent requirement, as directed by the Architect, shall be required.
- B. Prior to final payment and completion, the Contractor shall provide all marked up As Built Drawings required under other sections of the Specifications.

1.05 OPERATING AND MAINTENANCE INSTRUCTIONS

- A. Consult the individual sections of the specifications for the specific requirements for those sections and for further details and descriptions of the requirements
- B. Prior to final payment and completion the Contractor shall provide all Operating Manuals and Maintenance Instructions as required by the Contract Documents.

C. OPERATING INSTRUCTIONS AND MANUALS

1. Subcontractors, installers, and suppliers shall furnish to the Contractor two sets of operating and maintenance instructions of all mechanical, electrical, and manually operated equipment furnished and installed by them. Mechanical and electrical Subcontractors shall furnish instructions as specified in their respective sections.
2. The Contractor shall collect all of the above instructions, bind them into two complete sets, and submit them to the Architect who will deliver them to the Owner.
3. Submission of operating and maintenance instructions shall be a condition precedent to final payment.

D. INSTRUCTION OF OWNER'S PERSONNEL

1. Where specified in the individual sections of the specifications, the Contractor and Subcontractor shall instruct the Owner's personnel at the site, in the use and maintenance of equipment installed under the Contract.
2. Submission to the Architect of a certificate of compliance to this requirement, signed by the Contractor and the Owner's Representative, shall be a condition precedent to final payment.

1.06 FINAL COMPLETION

A. RELATED REQUIREMENTS

The Contractor's attention is directed to Section 00 70 00 of the General Conditions.

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 72 00

SURVEYS AND RECORD DRAWINGS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 RECORD DRAWINGS

- A. Record Drawings shall consist of all the Contract Drawings.
- B. From the sets of drawings furnished by the Owner, the Contractor shall reserve one set for record purposes. From this set, the Contractor shall detach and furnish, at no charge to the Mechanical and Electrical Subcontractors the drawings of their portion of the Work for the same purpose.
- C. The Contractor and the above Subcontractors shall keep their marked up As Built set on the site at all times and note on it in colored ink or pencil, neatly and accurately, at the end of each working day, the exact location of their work as actually installed. This shall include the location and dimensions of underground and concealed Work, and any architectural, mechanical, or electrical variations from the Contract Drawings. All changes, including those issued by Addendum, Change Order, or instructions by the Architect shall be recorded. Marked up As Built drawings shall be prepared for the entire project and include all Work, including but not limited to:

1. The location of all internal utilities and appurtenances, concealed by finish materials, including but not limited to valves, coils, dampers, vents, cleanouts, strainers, pipes, junction boxes, turning vanes, variable and constant volume boxes, ducts, traps, and maintenance devices.
 - a. The location of these items shall be shown by offsets to structure and drawing grid lines.
 - b. The tolerance for the actual location of these items on the marked up As Built Drawings shall be plus or minus two (2) inches.
 - c. Each item shall be referenced by showing a tag number, areas served, and function on the marked up As Built drawing
- D. The Architect may periodically inspect the marked up As Built drawings at the site. The proper and current maintenance of the information required on these drawings shall be a condition precedent to approval of the monthly applications for payment.
- E. At Substantial Completion the Contractor shall submit the complete set of marked up As-Built drawings to the Architect. The Contractor shall check all marked up As-Built drawings prepared by Subcontractors and certify in writing on the title sheet of the drawings that they are complete and correct, prior to submission to the Architect.
- F. The Architect shall review the marked up As Built drawings and verify by letter to the Owner that the Work is complete. The Architect shall incorporate all changes onto to original drawings.
- G. The Contractor may make a written request for copies of the completed Record Drawings. The Contractor shall reimburse the Owner directly for the cost of printing of any requested Record Drawings.
- H. Submission of accurate marked up As Built drawings and their approval by the Architect shall be a condition precedent to final payment.

END OF SECTION

DIVISION 02 **SUBSURFACE INVESTIGATION & DEMOLITION**

SECTION 02 41 00 **SELECTIVE DEMOLITION**

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect Work of this Section whether or not such Work is specifically mentioned in this Section.
- C. Coordinate Work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the Work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Selective Demolition Work required to complete the Work of the Contract including all the Selective Demolition Work shown on the plans, listed in the specification, and needed to install a complete assembly in every way. Coordinate the Selective Demolition Work with all the other trades for the project. Provide all demolition and disposal Work to complete the Selective Demolition Work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All Work of the Contract is related. It is the General Contractor's responsibility to review all the Work of each section, each Subcontractor, and each file sub-bidder for the entire project so that all the Work can be properly and completely performed.
- B. Selective Demolition Work includes, but is not limited to:
 - 1. In general, the Contractor shall supply all material, equipment, temporary protection, tools and appliances necessary for the proper removal of selected construction for the completion of the Work as required in the

Specifications, in accordance with good construction, and as required by the materials manufacturer.

2. Supply all protection necessary to protect the occupants, building area, and building systems. All means and methods are the responsibility of the Contractor. The Contractor is solely responsible for safety on the job site.
3. Extent of demolition as described on the drawings and in conjunction with all the new Work shown on the drawings. The Contractor is responsible for all demolition, disposal, and cleanup associated with the Work, whether or not shown on the plans or described herein required to complete the Work. Demolition includes, but is not limited to:
 - a. Auditorium
 - 1) Remove all existing carpet.
 - 2) Carefully remove entire existing suspended acoustical tile ceiling system and exposed "T" grid over the auditorium and in the rooms on the stage. Do not damage plaster above. Remove lighting system in and hanging below the suspended grid. NOTE: Much of the suspended ceiling hangers are connected to eye-bolt toggles through the plaster ceiling. Carefully remove the eye-bolts without creating plaster damage. Remove all fasteners.
 - 3) Remove all walls on the stage as shown and from "column to column." Walls consist of steel joist type studs with metal lath and plaster.
 - 4) Clean all existing exposed wood mill work including doors, frames, casing, wainscoting, paneling, large window shutters (all sides), and stage paneling and trim.
 - 5) Remove existing glass in lower sash of each existing window. Carefully remove existing exterior applied mutton pattern for reinstallation after the glass has been replaced.
 - 6) Remove entire level floor platform at balcony including all the framing, blocking, subflooring, underlayment, VCT finish and plaster knee wall with 7" steel joist type studs. Also remove stud and plaster knee walls over each stair existing metal railing within to remain.

SELECTIVE DEMOLITION

- 7) Remove all existing pendant, recessed ceiling mounted, and lay in lighting fixtures as well as wiring to above the plaster ceiling and make safe, by Electrical File Sub-Bidder.
 - 8) Remove existing HVAC unit from above the ceiling of the stage. See H drawing for information.
 - 9) Strip and sand all wood floors including at the stage for refinishing.
 - 10) Remove and dispose of loose furniture located in one half of the auditorium floor. See photos.
- b. Gymnasium
- 1) Remove existing folding wooden bleachers including the steel structure, hardware, and accessories.
 - 2) Push existing folding partition into the existing CMU pocket.
 - 3) Carefully remove existing scoreboard and deliver to the Owner to a location in the City at the Owner's direction.
 - 4) Remove existing electric panel cover and existing lighting controls.
 - 5) Strip and sand wood floors for refinishing.
 - 6) Remove strips of wood flooring to accommodate new detail over folding partition floor track.
 - 7) Remove existing wood flooring for replacement. See Section 09 64 40.
 - 8) Prepare walls, ceiling, HVAC equipment, ducts, and piping for painting by Painting File Sib-Bidder.
 - 9) Remove existing wall grilles for replacement.
 - 10) Remove abandoned athletic equipment and hardware shown on the plans. Patch CMU at recessed clocks to be removed and to fill various holes in CMU.
 - 11) Remove existing wall pads for replacement.

1.03 QUALITY ASSURANCE

A. Supervision:

1. Engage and assign supervision of Work to qualified personnel.

B. Regulations:

1. Comply with local codes and ordinances of governing authorities having jurisdiction.

1.04 SUBMITTALS

A. Schedule:

1. Submit schedule indicating proposed methods and sequence of operations for Selective Demolition.
2. Include coordination for shut-off, capping, and continuation of utility services in scope area.

1.05 JOB CONDITIONS

A. Condition of Structures:

1. Owner assumes no responsibility for actual condition of items or structures to be demolished.
2. Conditions existing at time of commencement of Contract will be maintained by Owner insofar as practicable.

B. Protections:

1. Provide temporary barricades and other forms of protection to protect Owner's personnel and general public from injury due to selective demolition Work. Safety is the sole responsibility of the Contractor.
2. Provide protective measures to provide free and safe passage of Owner's personnel and general public to and from area of selective demolition.
3. Take measures to protect against dust, obtain Owner's approval of means used for dust control.
4. Provide interior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or element to be demolished, and adjacent facilities or Work to remain.

5. Protect from damage existing finish Work that is to remain in place and becomes exposed during demolition operations.
 6. Protect adjacent materials and finishes with suitable coverings when necessary.
 7. Remove protections at completion of Work.
- C. Damages: Promptly repair damages caused to building or property by demolition Work at no cost to Owner.
- D. Traffic:
1. Conduct Selective Demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
 2. Do not close, block, or otherwise obstruct streets, walks, parking lot, or other occupied or used facilities without written permission from the authorities having jurisdiction.
 3. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- E. Utility services:
1. Maintain existing utilities, keep in service, and protect against damage during demolition operations.
 2. Do not interrupt existing utilities service occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide 48 hours notice if service must be interrupted.
 3. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.
- F. Environmental Controls:
1. Comply with governing regulations pertaining to environmental protection.
 2. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION

3.01 INSPECTION

- A. Before start of Selective Demolition Work, inspect areas in which Work will be performed.

3.02 PREPARATION

A. Structure Safety:

- 1. Provide shoring, bracing, or support to prevent movement, settlement, or collapse of structures demolition and adjacent facilities to remain.
- 2. Cease operations and notify the Owner's Representative immediately if safety of structure appears to be endangered.
- 3. Take precautions to support structure until determination is made for continuing operations.

B. Shoring and Bracing

- 1. If shoring and bracing is required, locate the system to clear permanent construction and to permit the completion of the Work.
- 2. Provide shoring and bracing system adequately anchored and braced to resist natural forces.
- 3. No shoring and bracing system shall remain at the completion of the Work.

3.03 DEMOLITION

A. General:

- 1. Perform Demolition Work in a systematic manner.
- 2. Use such methods as required to complete Work indicated on Drawings in accordance with Demolition Schedule and governing regulations.
- 3. If unanticipated mechanical, electrical, or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict with Consultant.

B. Disposal of Demolished Materials:

1. Remove debris, rubbish, and other materials resulting from demolition operations from site.
2. Transport and legally dispose of materials off site.
3. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution. Present receipts from certified waste disposal firms confirming hazardous waste disposal.
4. Burning of removed materials is not permitted on project site.

3.04 CLEANING AND REPAIR

- A. On completion of demolition Work, remove tools, equipment, and demolished materials from site. Remove debris on a daily basis.
- B. Remove protection and leave areas broom clean.
- C. Repair demolition performed in excess of that required.
- D. Repair adjacent construction or surfaces soiled or damaged by selective demolition Work.

END OF SECTION

DIVISION 04

MASONRY

SECTION 04 23 00

REINFORCED UNIT MASONRY

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Reinforced Unit Masonry work required to complete the work of the contract including all the Reinforced Unit Masonry work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all reinforcing, pinning, and finishes. Coordinate the Reinforced Unit Masonry work with all the other trades for the project. Provide all demolition and disposal work to complete the Reinforced Unit Masonry work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each Subcontractor, and each file sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Reinforced Unit Masonry work includes, but is not limited to:
 - 1. The work of this Section consists of patching the existing concrete masonry units at locations shown on the plans where the existing clocks are being removed.

REINFORCED UNIT MASONRY

- a. Sawcut existing CMU so the new CMU can be toothed in. Texture of new patch shall match existing.
2. Patch miscellaneous holes in the CMU with mortar. Carry 20, 1" diameter holes throughout the gym wall area at various locations and heights.

1.03 SUBMITTALS

- A. Shop drawings: Submit complete shop drawings of this section to Architect for approval. Shop drawings shall include reinforcement, splices and wall thickness.
- B. Product information.

1.04 DELIVERY AND STORAGE

- A. Deliver reinforcing to the site, bundled, tagged and marked. Store reinforcing off the ground, and keep covered. Immediately before placing, clean from reinforcing loose rust, dirt or other coatings which will reduce the bond.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Reinforcing Bars shall be of size shown and to conform to ASTM A615, Grade 60.
- B. Grout Materials
 1. Portland Cement shall conform to ASTM C150, Type I.
 2. Fine Aggregate shall be a clean, washed, well-graded sand conforming to ASTM C404.
- C. Mortar
 1. Mortar shall comply with ASTM C270, BIA Technical Note 8 and 8A. Use Type S mortar, nominal compressive strength 1800-to-2500 psi, consisting of 1 part Portland cement, 1/4-to-1/2 part lime, sand 2-1/4 to 3 times volume of cement and lime combined. Do not use masonry cement.
 2. Cement shall be an American Portland cement conforming to ASTM C150, Type I.
 - a. For exterior masonry, the cement shall fulfill the further requirements that it shall exhibit no efflorescence when cast into the form of 2 in. by 7 in. slabs comprising the cement under test,

REINFORCED UNIT MASONRY

Ottawa plastic mortar sand and distilled water (in proportions of 1:2 by weight, with water added to produce 100 percent flow) and subjected to a 7-day "wick test" in general conformity with the methods described in ASTM C67.

3. Lime shall be plastic hydrate conforming to ASTM C207, Type S (only).
4. Sand shall be clean, washed, uniformly well graded masonry sand conforming to the requirements of ASTM C144 with the further requirement that the fineness modulus shall be maintained at 2.25 plus/minus 0.10. Sand shall be from a single source meeting these requirements and as approved by the Architect after laboratory test. Source of supply shall not be changed during the course of job without written consent of the Architect.
5. Water shall be potable and free of injurious contaminants.
 - a. The method of measuring materials shall be such that the specified proportions of the materials can be controlled and accurately maintained.
 1. No factory prepared masonry cement shall be used.
 - b. All cementitious materials and aggregate shall be mixed with the proper amount of water to produce a workable consistency. Hand mixing shall not be used.
 - c. Mortar shall be used and placed in final position within 2-1/2 hours after mixing. Mortar which has stiffened because of evaporation within the 2-1/2 hour period may be retempered once (only) to restore its workability.

D. CONCRETE MASONRY UNITS

1. Concrete masonry units (CMU) shall be moisture controlled, normal weight concrete units conforming to Grade N, Type 1 of ASTM C90 for Hollow Load-Bearing Concrete Masonry Units with a minimum compressive strength of 1,000 psi. Aggregate shall conform to ASTM C33.
 - a. Units shall be scored to form an 8" x 8" pattern on one side where indicated on the plans.
 - b. Units shall be scored to form an 8" x 8" pattern on both sides where indicated on the plans

REINFORCED UNIT MASONRY

- c. All other units shall be plain faced.

E. ACCESSORIES

1. Joint Reinforcements

- a. Provide joint reinforcement in all CMU masonry construction.
- b. Joint reinforcements shall be manufactured from cold drawn steel wire conforming to ASTM A82 and shall consist of two deformed longitudinal rods welded at 16 in. intervals in the same plane to a continuous diagonal cross rod forming a truss design. Longitudinal and cross rods shall be No. 9 gauge. Width of reinforcement shall be 1-1/2 in. to 2 in. less than thickness of wall or wythe as applicable. Standard Truss by Dur-O-Wall; Block Truss AA600 by AA Wire Products; Regular Truss Ty by Ty-Wall; Truss Type by Wire Bond or equal.
- c. Reinforcement for exterior walls shall be hot-dip galvanized after fabrication with 1.5 oz. zinc coating complying with ASTM A153, Class B2. Reinforcement for interior walls and partitions may be uncoated steel.
- d. Prefabricated or job fabricated corner and tee sections shall be used to form continuous reinforcement around corners, and for anchoring abutting walls and partitions.

PART 3 - EXECUTION

3.01 CMU MASONRY

- A. Lay masonry units in running bond, with vertical joints in each course centered on units in courses above and below. Do not wet masonry units.
- B. Maintain vertical continuity of cells as all cells are to be reinforced and grouted. Cells shall provide a cavity at least 2-1/2 in. by 3 in. in size at exterior walls.
- C. Admixtures and Antifreeze Compounds shall not be used.

3.02 GROUT MIX

- A. Use methods which will ensure that specified proportions are controlled and accurately maintained. Measure aggregate material in a damp, loose condition.
- B. Grout shall conform to ASTM C476. Use "Fine Grout". Proportion by volume, one part by volume of Portland cement, 0 to 1/10 part by volume of Hydrated

Lime and 2-1/4 to 3 times the sum of the volume of cementitious materials of fine aggregate measured in a damp, loose condition.

- C. Mix grout to have a slump of 10 in. plus/minus 1 in.
- D. Average compression strength at 28 days shall be 2500 psi.

3.03 PLACING REINFORCING

- A. Do not bend or cut off dowels protruding from concrete foundation wall or slab; break masonry unit web if conflict with dowel occurs at reinforced cavities.
- B. Position reinforcing accurately using the sizes and spacing of bars shown on drawings.
- C. Maintain 1 in. minimum clearance on all sides of reinforcing bars. Support and secure bars against displacement during grouting.
- D. Bars shall be a minimum of 4'-0" long and shall be lapped a minimum of 2'-0" at splices.

3.04 PLACING GROUT

- A. Build masonry walls to a height not exceeding 4'-0". Insert steel reinforcing in proper cavities. Pour grout in cavities which contain reinforcing. Fill cavities to a level which will allow for a 2'-0" lap when next bar is inserted. Repeat operation by laying masonry units in 4 ft. lifts.
- B. Do not pour grout until mortar on masonry wall has cured 24 hours.
- C. Move the grout from the mixer to the point of deposit as fast as practical. Discard grout not placed within 1-1/2 hours after water is first added to the batch. Use placing methods which prevent segregation of the mix.
- D. Thoroughly puddle each pour to insure complete filling of the grout space.
 - 1. Grout shall be placed by practical means. Grout may be poured in place, pressure-grouted by gravity, or pumped. Use of pneumatic pressure or dry-packed grouting requires approval of Architect.
 - 2. Grout shall be poured from one side only, so as to flow across to open side to avoid air entrapment. Rod or vibrate grout during placing.

E. Finishing Unconfined Grout

1. After grout has acquired its initial set and will not sag, all unconfined, exposed edges shall be cut off, leaving sloping "shoulders". Entire exposed area shall then be painted within 24 hours with a vapor-proof paint or plastered with a Portland cement-sand mortar.

F. CURING

1. Moist cure with continuously wet burlap, or by equivalent approved method, for not less than 72 hours at temperature of not less than 50 degrees F. Provide heated enclosure when temperature of ambient air or of concrete or steel plate is below 50 degrees F.

END OF SECTION

DIVISION 05

METALS

SECTION 05 40 00

COLD-FORMED METAL FRAMING

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect Work of this Section whether or not such Work is specifically mentioned in this Section.
- C. Coordinate Work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that the materials and equipment to be furnished complete in every respect, and that this Contractor shall provide all items needed and usually furnished in connection with such systems to provide a complete installation. Equipment, materials, and articles incorporated in the Work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Cold Formed Metal Framing Work required to complete the Work of the Contract including all the Cold Formed Metal Framing Work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all hardware, finishes, and accessories. Coordinate the Cold Formed Metal Framing Work with all the other trades for the project. Provide all demolition and disposal Work to complete the Cold Formed Metal Framing Work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All Work of the Contract is related. It is the General Contractor's responsibility to review all the Work of each section, and each Subcontractor for the entire project so that all the Work can be properly and completely performed.
- B. Cold Formed Metal Framing Work includes but is not limited to the following:
 - 1. Fabrication and installation of cold formed framing units required to form
 - a. Interior walls, ceilings, and soffits.
 - b. Other interior construction noted on the plans to receive cold-formed metal framing.

COLD-FORMED METAL FRAMING

1.03 QUALITY ASSURANCE

- A. Component Design: Compute structural properties of cold formed framing members in accordance with American Iron and Steel Institute (AISI) "Specification for the Design of Cold-Formed Steel Structural Members," Latest Edition.
- B. Welding: Use qualified welders and comply with American Welding Society (AWS) d1.3 "Structural Welding Code - Sheet Steel".
- C. Inspection: The Owner reserves the right to engage the services of a qualified "Special Inspector" during installation of cold-formed metal framing components to confirm that installation complies with Contract Documents and final shop drawings.
- D. Component Installation: In-place components will be inspected to confirm compliance with size, gauge and spacing requirements as well as bridging and cross brace requirements specified in the Contract Documents and in final shop drawings.
- E. Attachments: Welds and mechanical fasteners will be visually inspected to confirm that Project requirements for spacing and size are met. Verify that attachment of cold formed framing is in conformance with details shown in the Contract Documents or reviewed shop drawings. Attachments will be periodically inspected for tightness.

1.04 SUBMITTALS

- A. Product Data: Submit copies of manufacturer's product information and installation instruction for each item of framing and accessories including fasteners. Distribute one (1) additional copy of installation instructions to the installer.
- B. Shop Drawings: Submit shop drawings (1 sepia, 3 prints) for all necessary components and installations of cold formed framing.
 - 1. Include placing drawings for all framing members and all prefabricated components showing size and gauge designations, number, type, location and spacing. Indicate strapping, bracing, splices, bridging, stiffeners, accessories, connections, and details required for proper installation. Reproduced copies of structural Construction Drawings are not acceptable.
 - 2. The Contractor shall engage the services of a professional engineer registered in the State of Massachusetts to prepare complete shop drawings and structural design computations of all Work of this Section,

and such Drawings shall bear the engineer's professional seal. Note: Manufacturer's shop drawings stamped by the engineer are acceptable in lieu of those actually prepared by the engineer.

3. The Structural design computations shall provide a complete structural analysis of all typical and special conditions of construction, and shall certify conformance to the governing laws and building code.
- C. Certifications: Submit to Architect a statement from manufacturer certifying that materials and sections provided comply with the minimum requirements specified in the Contract Documents. Include certificates of compliance for mechanical fasteners.
1. Provide certification that welders employed in the Work of this project have satisfactorily passed AWS qualification tests within the previous 12 months.

1.05 DELIVERY AND STORAGE

- A. Protect metal framing units from rusting and damage. Deliver to the project site in manufacturer's unopened containers or bundles fully identified with name, brand, type, and grade. Store off the ground in a dry ventilated space or protect with suitable waterproof coverings.

PART 2 – PRODUCTS

2.01 METAL FRAMING

- A. System Components: With each type of metal framing required provide manufacturer's standard steel runners (tracks), blocking, bridging, clip angles, reinforcements, and accessories as recommended by manufacturer for the applications indicated, as needed to provide a complete metal framing system.
- B. Materials and Finishes: No framing shall be less than 20 gauge unless expressly approved. All cold-formed metal framing shall be galvanized.
- For 18 gauge and lighter units fabricate metal framing components of commercial quality steel sheet with a minimum yield point of 33,000 psi, ASTM A653.
- For 16 gauge and heavier units fabricate metal framing components of commercial quality sheet steel with a minimum yield point of 50,000 psi, ASTM A653.
- C. Provide galvanized finish to all metal framing and accessories with ASTM A653 for minimum G 60 coating.

- D. "C" - Shaped studs: Manufacturer's standard load-bearing steel studs of size, gauge, shape and properties indicated with 1.5" minimum flange and flange return lip.
- E. Base and Deflection Track: Gauge and size shall match studs, galvanized.
- F. Provide mechanical fasteners complying with the following specifications:
 - 1. Power driven fasteners shall be manufactured from modified AISI 1061 steel tempered to a hardness of 52-56 HRC and zinc plated in accordance with ASTM B633, SCI, Type III. Shear and tension values shall meet or exceed values listed in ICBO Report #2388. All fasteners to have .205 inch shank diameter unless otherwise indicated on Drawings.
 - 2. Expansion masonry anchors shall meet the description in Federal Specification FF-S-325 Group II, Type 4; Group VIII, Type 1 or approved equal. Anchors shall be zinc plated in accordance with ASTM B633 and shall have minimum shear and tension values listed in ICBO Report #2156 or Report #2895.
 - 3. Screw type fasteners shall be made from steel conforming to AISI 1019 or AISI 1022, case hardened and tempered. Screw type fasteners shall be treated with Stalgard Treatment, or equivalent, to prevent galvanic corrosion and shall have tension and shear values which meet or exceed the values listed for the Kwik-Pro self drilling screws, as manufactured by Hilti.
- G. Pressure-treated CDC plywood of thicknesses shown on the drawings.

2.02 FABRICATION

- A. General: Framing components may be prefabricated into panels prior to erection. Fabricate panels plumb, square, true to line and braced against racking with joints welded. Perform lifting of prefabricated panels in a manner to prevent damage or distortion to any members in the assembly.
- B. Fastenings: Attach similar components by welding. Attach dissimilar components by welding, bolting, or screw fasteners, as standard with the manufacturers.
- C. Wire tying of framing components is not permitted.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Pre-Installation Conference: Prior to the start of installation of metal framing Work, meet at the project site with the installers of other Work that interfaces with cold formed framing. Review areas of potential interference and conflicts, and coordinate layout and support provisions for interfacing Work.

3.02 INSTALLATION

- A. Manufacturer's Instructions: Install metal framing systems in accordance with manufacturer's printed or written instructions and recommendations, unless otherwise indicated.
- B. Runner Tracks: Install continuous tracks sized to match studs. Align tracks accurately to the layout at the base and tops of studs. Secure tracks as recommended by the stud manufacturer (unless otherwise noted on Drawings) for the type of construction involved, except do not exceed 24" o.c. spacing for nail or power-driven fasteners, or 16" o.c. for other types of attachment. Provide fasteners at corners and ends of tracks.
- C. Set studs plumb, except as needed for bracing.
- D. Where stud system abuts structure, including masonry walls, anchor ends of stiffeners to supporting structure.
- E. Install supplementary framing, blocking and bracing in the metal framing system wherever walls or partitions are indicated to support fixtures, equipment, services, casework, heavy trim and furnishing, and similar Work requiring attachment to the wall or partition. Where type of supplementary support is not otherwise indicated, comply with the stud manufacturer's recommendations and industry standards, taking into consideration the weight or loading resulting from the item supported.
- F. Installation of Wall Stud System:
 - 1. Secure studs to top and bottom runner tracks by either welding or screw fastening at both inside and outside flanges. Do not secure studs to directly to deflection track
 - 2. All walls to have horizontal stiffeners and bridging installed and properly attached by welding or screwing at each intersection before any studs are loaded.

3. Provide fire or pressure-treated wood blocking as required for plumb, level installation.
- G. Installation of Joists: Install level and plumb, complete with bracing and reinforcing as indicated on Drawings. Provide not less than 1-1/2 inch end bearing. Reinforce ends with end clips, steel hangers, steel angle clips, steel stud section, or as otherwise recommended by joist manufacturer.
1. Where required, reinforce joists at interior supports with single short length of joist section located directly over interior support, snap-on shoe, 30 percent side-piece lapped reinforcement, or other method recommended by joist manufacturer.
 2. Secure joists to interior support systems to prevent lateral movement of bottom flange.
- H. Field Painting: Touch-up shop-applied protective coatings damaged during handling and installation. Use galvanizing repair paint for galvanized surfaces.

END OF SECTION

DIVISION 05

METALS

SECTION 05 50 00

MISCELLANEOUS METALS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Miscellaneous Metals work required to complete the work of the contract including all the Miscellaneous Metals work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all reinforcing, pinning, and finishes. Coordinate the Miscellaneous Metals work with all the other trades for the project. Provide all demolition and disposal work to complete the Miscellaneous Metals work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each sub-Contractor, and each file sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Miscellaneous Metals work includes, but is not limited to:
 - 1. Provide all other Miscellaneous Metals as shown on the plans.

1.03 SUBMITTALS

- A. Submit complete shop drawings in accordance with the provisions of SECTION 01 31 00 - SUBMITTALS in GENERAL REQUIREMENTS.
- B. Do not commence fabrication of any work or begin installation until approval has been obtained from the Architect.

1.04 STANDARDS AND CODES

- A. The following Specifications, Standards and Codes of current issue form a part of this Specification.
- B. American Society for Testing and Materials: A36, A48, A53, A123, A143, A149, A153, A246.
- C. American Iron and Steel Institute, applicable standards.
- D. American Institute for Steel Construction (AISC): Code of Standard Practice for Steel Buildings and Bridges: Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings.
- E. Federal Specs: QQ-1-652A, Iron Gray Castings; QQ-S741a, Steel Plates, Shapes and Bars, Carbon, Structural: WW-P521 Malleable Iron.
- F. American Welding Society Code: Standard Code for Arc and Gas Welding in Building Construction.
- G. National Association of Architectural Metal Manufacturers, applicable publications.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All metals shall be free from defects impairing strength, durability or appearance and shall be of best commercial quality for each intended purpose.
- B. Fastenings which are exposed shall be of same material, color and finish as the metal to which they are applied, unless otherwise shown on the Drawings, or specified. All fastenings shall be of heavy gauge as customarily used in the trades to safely support the required loads.
- C. Steel shapes shall conform to the requirements of ASTM A36 for Structural Steel. Steel pipe shall conform to ASTM A53.

- D. Filler Metal for Welding: Welding electrodes for manual shielded metal arc welding shall conform to ASTM A233-58T, E60 or E70 Series. Bare electrodes and granular flux used in the submerged arc process shall conform to AISC Specifications.
- E. Details and specifications of accessory items for which standard products are available are representative guides to requirements for such items. Standard products generally meeting such requirements will be accepted if details of construction and installation are approved by the Architect.

2.02 WELDING

- A. Welding shall be continuous. Tack welding will not be permitted for finished work. All exposed welds shall be clean and ground smooth.
- B. Where structural joints are made by welding, the details of all joints, the techniques of welding employed, the appearance and quality of welds made, and the methods used to correct defective work shall conform to AISC and AWS Codes.
- C. Welds shall be made only by certified welders who have previously been qualified by tests as prescribed in AWS Standard Qualification Procedure for the type of work required.
- D. The use of a gas cutting torch in the field for correcting fabrication errors will be permitted on structural framing members only when the prior written approval of the Architect has been obtained for each specific condition.

PART 3 - EXECUTION

3.01 WORKMANSHIP

- A. All work shall be executed by experienced mechanics and shall conform to details, be clean and straight with sharply defined profiles. Unless otherwise particularly noted, finished surfaces shall have smooth finish.
- B. Shearing and punching shall be done cleanly so as not to deform or mar adjacent surface.
- C. Shop connections shall be welded and field connections bolted unless otherwise indicated. Bolts shall be turned up tight and threads deformed to prevent loosening.
- D. Castings shall be sound and free from warp, holes and other defects that impair strength and appearance. Exposed surfaces shall have a smooth finish with sharp well-defined lines and arises. Machined joints shall be milled to a close fit.

Provide all necessary lugs, brackets and similar items so that work can be assembled and installed in a neat substantial manner.

- E. Flanges shall be concealed where practicable. Thickness of metal and details of assembly and support shall be such as to provide ample strength and stiffness.
- F. Provide holes and connections as required to accommodate work of other trades and for site assembly of metal work. Holes shall be drilled or punched and reamed in the shop. Show sizes and locations of all such holes on the shop drawings.
- G. Joints and connections exposed to weather shall be formed to exclude water.
- H. All materials and workmanship under this Section shall be subject to inspection in the mill, shop or field by the Architect, or by qualified inspectors retained by the Owner. Inspection shall be without expense to the Owner. However, such inspection, wherever conducted, shall not relieve Contractor of his responsibility to furnish materials and workmanship in accordance with Contract requirements.

3.02 INSTALLATION

- A. Take all required measurements at the building site. Check measurements, compare dimensions and other data with various trades installed adjoining work to assure proper coordination.
- B. Conform to AISC Code for all drilling and fitting, cutting, welding, bolting and riveting required to erect, install and fit metal work to adjoining work. Furnish all screws, bolts, anchors, etc., required to attach metal work securely to adjoining work.
- C. Do not cut or alter members in the field without Architect's approval. Do not enlarge unfair holes by burning and forcing, but correct by reaming.
- D. Be responsible for the correct location of miscellaneous metal work, including anchor bolts and base plates, and angles. Take particular care to maintain steel shapes, etc., plumb and level during the construction.
- E. All work shall be accurately set to established lines and elevations and rigidly fastened in place with suitable attachments to the construction of the building.
- F. Furnish, fabricate, install and anchor all light iron, miscellaneous metal work as indicated on the Drawings and as specified herein. Install all supports and anchors for miscellaneous metal work.

- G. Furnish all required anchors, anchor bolts, fastenings, etc., for attachment of work of all trades to concrete and masonry, except where otherwise specified or obviously included under other Sections of the Specifications.
- H. Clean up site of all debris, tools and materials daily.

3.03 PROTECTION

- A. The Contractor is responsible for protecting the finish of the railings after coating during storage, delivery and installation.
- B. Touch-up scrapes, scratches and any other mar in the finish after installation as per the specification.
- C. If Architect determines that the paint finish has been damaged by the Contractor, beyond repair by touch-up, the entire railing section shall be removed and taken back to the shop and re-finished as per the specification and at no additional cost to the Owner.

END OF SECTION

DIVISION 06

WOOD AND PLASTICS

SECTION 06 10 00

ROUGH CARPENTRY

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Rough Carpentry work required to complete the work of the contract including all the Rough Carpentry work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all reinforcing, pinning, and finishes. Coordinate the Rough Carpentry work with all the other trades for the project. Provide all demolition and disposal work to complete the Rough Carpentry work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each sub-contractor, and each file sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Rough Carpentry work includes, but is not limited to:
 - 1. All General Contractor's temporary work, including barricades, tarpaulins, protective covers, dust barriers, scaffolding, and entrances.

2. Installation of materials supplied under other specification sections, including but not limited to:
 - a. Auditorium:
 - 1) Patch/repair existing plaster ceiling with infill blocking, patch coffer, columns, and walls at stage and balcony.
 - 2) Prepare floors at demolition.
 - 3) Install blocking.
3. Install all framing and blocking required to complete the work.
4. Install 18" x 18" access door to replace broken access door, remove existing.
5. Install 26" x 32" wall louvers, remove existing.

1.03 QUALITY ASSURANCE

- A. Softwood Lumber Standards: Provide lumber to comply with PS 20 "American Softwood Lumber Standard" and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee's Board of Review.
- B. Plywood Standards: Provide plywood to comply with PSI-74 "US Product Standard for Construction and Industrial Plywood" for plywood panels and, for products not manufactured under PSI provisions, with American Plywood Association (APA) "Performance Standard and Policies for Structural Use Panels" and with ANSI A199.1.
- C. Grade Stamps: Each piece of lumber and plywood delivered to job site shall have factory-market grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species and moisture content at time of surfacing, and mill.
- D. Preservation treated lumber shall be marked according to AWPB Quality Mark Requirements, complying with AWPB LP-2.

1.04 PRODUCT HANDLING

- A. Delivery and Storage: Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood. Provide for air circulation within and around stacks and under temporary coverings.

1.05 JOB CONDITIONING

- A. Time delivery and installations of carpentry work to avoid delaying other trades whose work is dependent on or affected by the carpentry work and to comply with protection and storage requirements.
- B. Contractor must examine the substrates and supporting structures and the conditions under which the carpentry work is to be installed, and notify the Owner in writing of conditions until unsatisfactory conditions have been corrected in a manner acceptable to the installer.
- C. Coordinate location of furring, nailers, blocking, grounds, and similar supports so that attached work will comply with design requirements.

1.06 SUBMITTALS

- A. Within thirty (30) days after Notice to Proceed, submit complete materials data and Shop Drawings in full compliance with Section 01 31 00.
- B. Submit a complete list of all materials and products required to complete the work of this Section.
- C. Submit full Product Data of all manufactured or proprietary items, and certification of compliance with these requirements for all items to be furnished exactly as specified.
- D. Submit Shop Drawings of all items to be fabricated off or on site as requested by the Consultant or required for proper coordination of the work. Shop Drawings may include detailed framing plans and elevation, bracing or connection details, sheathing layouts, schedules or diagrams of openings, and other information.

PART 2 – PRODUCTS

2.01 LUMBER, GENERAL

- A. General Quality: Lumber shall be of new, sound stock, straight, or consistent size, free of stains, and mildew, and be surfaced on four sides. Lumber which will be incorporated into the finished work shall have a moisture content of not more than 19%.
- B. Nominal sizes are indicated, except as shown by detailed dimensions. Provide dressed or worked and dressed lumber as applicable manufactured to the actual sizes as required by PS20 or to actual sizes and patterns as shown, unless otherwise indicated.
- C. Lumber lengths: Lumber shall be furnished in longest particle lengths with respect to each intended use, and single length pieces shall be used whenever

possible.

2.02 LUMBER, MATERIAL

A. Dimensional: "Concealed" Lumber

1. Temporary Framing: Provide "Standard" grade lumber, any species.
2. Concealed Boards, Blocking: Provide Southern Pine No. 2 or any species graded construction boards per WCLIB or WWPA rules. Concealed boards shall have maximum moisture content of 19%.
3. Preservative- treated Lumber shall be impregnated under pressure with water-borne preservative to comply with AWPA-U1. All treated wood shall be kiln-dried to a maximum moisture content of 19%. All field cuts shall be treated with compatible preservative materials.

B. Fasteners and Anchorages: Provide size, type material and finish as indicated and as recommended by applicable standards and the Massachusetts building Code. Where carpentry work is exposed to weather, or exterior surfaces are in contact with the ground, provide fasteners and anchorages with hot-dip zinc coating.

2.03 ROUGH HARDWARE

A. Fabricated hardware items shall be by Teco, Simpson, Heckman, or Silver as approved by the Consultant. In exterior areas or where in contact with concrete, rough hardware shall be hot-dip galvanized. In other areas electrogalvanizing will be acceptable. Select products for size of members joined or supported and to develop the full strength of the members.

2.04 ACCESS DOORS

- A. Furnish Access Doors for access to all concealed control valves, cleanouts, valves, expansion joints, and to all other concealed parts of the Plumbing System that require accessibility for the proper operation and maintenance of the system. These doors shall be installed under the appropriate SECTION of the Specifications as determined by the surface upon which the panels are mounted.
- B. All Access Doors shall be located in a workmanlike manner in closets, storage rooms, and/or other non-public areas, positioned so that the valve or part can be easily reached, and the size shall be sufficient for this purpose (minimum size 12" x 16"). Furnish Access Doors for each pipe space to permit thorough inspection of same. When access doors are required in corridors, lobbies, or other habitable areas, they shall be located as directed by the Architect.
- C. Access doors shall be prime painted and completed with cylinder lock and two (2)

Correlate location of furring, nailers, blocking, grounds and similar supports to allow attachment of other work.

- B. Defects: Discard lumber or other material with defects which might impair the quality of work.
- C. General Execution: Construct all carpentry work called for in the Drawings or reasonably inferable therefrom. Set carpentry work to required levels and lines, with members plumb, level and true to line and cut and fitted. Shim as required using concealed shims. Securely attach carpentry work to substrate by anchoring and fastening as shown and as required by recognized standards. Where nailing or power driving into concrete or masonry, take care to avoid puncturing conduits, pipes, ducts, etc. embedded in such work.

3.02 LAYING OUT WORK

- A. The Contractor shall be responsible for establishing lines and levels in accordance with the conditions of the Contract and general requirements.
- B. Lay out all work in accordance with the Contract Documents, approved Shop Drawings, and completed portions of the work. Report all discrepancies to the Consultant promptly for correction and adjustment. In the event of failure to do so, be responsible for correction of any errors.

3.03 MISCELLANEOUS BLOCKING AND CARPENTRY

- A. Furring, blocking, and backing shall be furnished and installed where required for reception of wall board, formation of architectural features, concealment of pipes, conduits, ducts, attachment for supports for toilet room accessories, building specialties, and other fixtures. Contractor shall consult with the trades concerned and set furring and blocking they require.
- B. Dressed wood grounds shall be furnished and installed as indicated or as required for securing trim or other finish. Set grounds rigid, true, and in perfect alignment. Nail grounds to wood members, and secure to concrete or masonry with nailing blocks or plugs, or expansion type anchors. Provide wood stripping where indicated or required for the attachment of finish materials to wood, concrete, masonry, or other surfaces.

3.04 INTENT AND WORKMANSHIP

- A. It is not the intent of this Section to hereinafter define the types, sizes, or installation methods for each item of work. Methods of installation, joinery, sizes, spacing of nailers and furring strips, and other information pertaining to the lumber, plywood, and other items of required work, shall be installed in accordance with the details on the Drawings for the specified areas involved.

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- B. Work that is to be finished or painted shall be free from defects or blemishes on surfaces exposed to view that will show after the finish coat of paint is applied. Any material which is in any way defective and not up to specifications for quality and grade for its intended use, or otherwise not in proper condition, shall be rejected.

END OF SECTION

DIVISION 06

WOOD AND PLASTICS

SECTION 06 20 00

FINISH CARPENTRY

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect Work of this Section whether or not such Work is specifically mentioned in this Section.
- C. Coordinate Work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the Work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Finish Carpentry Work required to complete the Work of the Contract including all the Finish Carpentry Work shown on the plans, listed in the specification, and needed to install a complete assembly in every way. Coordinate the Finish Carpentry Work with all the other trades for the project. Provide all demolition and disposal Work to complete the Finish Carpentry Work. Patch to match all adjacent surfaces that are disturbed left exposed, or unfinished. All Work of the Contract is related. It is the General Contractor's responsibility to review all the Work of each section, each Subcontractor, and each file sub-bidder for the entire project so that all the Work can be properly and completely performed.
- B. Finish Carpentry Work includes, but is not limited to:
 - 1. Auditorium
 - a. Install all finish carpentry, radiator covers, door hardware, wall trim and crown/cove moldings indicated on the plans.

- b. Install all door hardware.
- c. Install trim to create the lighting coffers at ceiling.
- d. Install dead bolt door hardware with floor/head bolts.
- e. Clean and treat all existing exposed woodwork in the entire Auditorium by cleaning thoroughly with TSP solution, rinse thoroughly with warm water, and seal with Murphy's Oil Soap. Because the wood is aged and has not been treated recently, assume that two applications of Murphy's Oil Soap will be required. This includes all the doors, frames, paneling, trim, and all decorative or exposed wood in the room.

2. Gymnasium:

- a. Install new aluminum bleachers.
- b. Install mesh divider curtain in track fastened to new finished wood installed over the slot for the old curtain at the bottom side of the old ceiling track structure.
- c. Install wall pads and athletic accessories noted.
- d. Clean and treat all existing exposed woodwork in the entire Gymnasium by cleaning thoroughly with TSP solution, rinse thoroughly with warm water, and seal with Murphy's Oil Soap. Because the wood is aged and has not been treated recently, assume that two applications of Murphy's Oil Soap will be required.

1.03 RELATED WORK

- A. The following items of related Work are specified and included in other Sections of the Specifications.

1.04 SHOP DRAWINGS

- A. Submit complete shop drawings in accordance with provisions of the GENERAL CONDITIONS.
- B. Shop drawings shall include:
 - 1. Submit shop drawings on all items of architectural woodwork.
 - 2. Product data, shop drawings, and samples for kitchen cabinets.

3. Submit manufacturer's descriptive literature of specialty items not manufactured by the architectural woodworker, as requested by the Architect.

1.05 SAMPLES

- A. Submit the following samples in accordance with provisions of the GENERAL CONDITIONS:
 1. Submit samples of each wood specie which is to receive transparent finish at job site, as requested by the Architect.
 2. Submit finished samples of each finish to be applied at the factory.
 3. Submit finished samples of plastic laminate countertops.

1.06 FIELD DIMENSIONS

- A. The woodwork manufacturer is responsible for details and dimensions not controlled by job conditions and shall show on his shop drawings all required field measurements beyond his control. General Contractor and woodwork manufacturer shall cooperate to establish and maintain these field dimensions.
- B. Verify dimensions by field measurement. Measure for countertops after base cabinets are installed.

1.07 PRODUCT HANDLING

- A. The woodwork manufacturer and the Contractor shall be jointly responsible to make certain that woodwork is not delivered until the building and storage areas are sufficiently dry so that the woodwork will not be damaged by excessive changes in moisture content.

1.08 QUALITY ASSURANCE

- A. Standards:
 1. The Quality Standards of the Architectural Woodwork Institute shall apply and by reference are hereby made a part of this Specification. Any reference to Premium, Custom or Economy in this Specification shall be defined in the latest edition of the AWI "Quality Standards."
 2. Any item not given a specific quality grade shall be Custom grade as defined in the latest edition of the AWI Quality Standards.
 3. Competence: The approved woodwork manufacturer must have a reputation for doing satisfactory Work on time and shall have successfully

completed comparable Work. The Architect reserves the right to approve the woodwork manufacturer selected to furnish all of the woodwork.

4. Comply with KCMA A161.1 for Kitchen Cabinets.
5. Comply with KCMA A161.2 for Plastic Laminate Countertops.

PART 2 – PRODUCTS

2.01 STANDING AND RUNNING TRIM

- A. Includes all exterior and interior casings, stops, stools, door jambs, jamb liners, board type paneling, chair rails, cornice, fascias, valances, etc. It shall be specified if plant assembled miters or openings are required.
- B. Radiator covers shall be solid oak, stained with three (3) coats of polyurethane, and perforated metal screen. Provide a separate cover enclosure at each radiator.
- C. Coffered light assembly shall be $\frac{3}{4}$ " plywood with poplar veneer for paint finish and BROSCO #B-614, $\frac{1}{4}$ " Crown Molding. Coordinate all trim with blocking and lighting.

PART 3 – EXECUTION

3.01 WORKMANSHIP AND INSTALLATION REQUIREMENTS

- A. Finished architectural woodwork shall be dressed and sanded, free from machine and tool marks, abrasions, raised grain, or other defects on surfaces exposed to view. Construction and workmanship of architectural woodwork items shall conform to, or exceed, the requirements for either Premium or Custom Grade as established under AWI Quality Standards.
- B. Joints shall be tight and so formed as to conceal shrinkage. Mortise and tenon joints shall be set in glue under pressure. Shop miters 4" or greater shall be glued and doweled or locked with metal spline. Miters less than 4" shall be glued and splined with the spline concealed.
- C. All exposed sides and ends of plywood shall be edged with solid strip of matching hardwood, at least $\frac{1}{2}$ " wide, and the full width of the plywood edge. Miter edge strips at corners.
- D. Architectural woodwork shall be properly framed, closely fitted, and accurately set to the required lines and levels and shall be rigidly secured in place.
- E. Install cabinets with no variations in flushness of adjoining surfaces by using concealed shims. Where casework abuts other finished Work, scribe and cut for

accurate fit. Provide filler strips, scribe strips, and moldings in finish to match casework face.

- F. Install cabinets without distortion so doors and drawers fit openings properly and are aligned.
- G. Install level and plumb to a tolerance of 1/8 inch in 3 feet (3.2 mm in 2.4 m).
- H. Fasten each cabinet to adjacent unit and to structural members of wall construction. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches (600 mm) o.c.
- I. Fasten plastic-laminate countertops by screwing through corner blocks in base units into underside of countertop. Spline and glue joints in countertops and use concealed mechanical clamps.
- J. Fasten solid surface countertops by screwing through corner blocks in base units into underside of countertop. Align adjacent surfaces. Form seams 1/8 inch (3.2 mm) wide and adhere with manufacturer's recommended joints adhesive in color to match countertop. Dress joints smooth, remove surface scratches, and clean entire surface.

3.02 PAINTING AND FINISHING

- A. All painting and finishing shall be provided under SECTION 09 99 00 - PAINTING, but it shall be the responsibility of the Contractor to see to it that all finished woodwork and doors be primed or sealed before installation as specified in SECTION 09 99 00 - PAINTING. Paint or seal coats must be dry before items are installed.
- B. All finish Work shall be sandpapered and field joints shall be left in perfect condition for finishing under SECTION 09 99 00 - PAINTING.

END OF SECTION

DIVISION 07

THERMAL AND MOISTURE PROTECTION

SECTION 07 92 13

SEALANTS AND CAULKING

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that the equipment to be furnished complete in every respect, and that this Contractor shall provide all equipment needed and usually furnished in connection with such systems to provide a complete installation. Equipment, materials, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Sealants and Caulking work required to complete the work of the contract including all the Sealants and Caulking work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all hardware, finishes, and accessories. Coordinate the Sealants and Caulking work with all the other trades for the project. Provide all demolition and disposal work to complete the Sealants and Caulking work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each Subcontractor, and each file sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Sealants and caulking work includes, but is not limited to:
 - 1. Provide a complete watertight installation as per good construction practice.

2. Provide paintable acrylic sealant at the work areas and at the connection of all dissimilar materials to provide a complete finished surface, ready for paint.

1.03 SUBMITTALS

- A. Product Literature: Submit 4 copies of product data sheets and the manufacturer's installation instructions.
- B. Color Samples: Copies of manufacturer's standard color charts shall be submitted. Cured samples of each chosen color shall be submitted for verification of actual color to be installed.

1.04 PRODUCT HANDLING

- A. Delivery shall be in manufacturer's original unopened container, clearly identifying each product specified, relating it to the product literature submitted.

1.05 GUARANTEES

- A. Exterior sealant shall be guaranteed by the manufacturer against cohesive and adhesive failure of the sealant and water penetration through the joints for TWENTY (20) years.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Colors: Provide full range of manufacturer's color samples for Architect's review.

2.02 MATERIALS

- A. Exterior and Window Sealant: Medium modulus, neutral cure single component, non-sag, Silicone sealant - ASTM C-920-79/Type S/Class 25/Grade NS, such as 795 by Dow Corning, 864 by Pecora, or approved Equal.
- B. Interior Sealant: Paintable Acrylic sealant – Benjamin Moore's Crown and Trim Sealant 464, Tremco Acrylic Latex Sealant, or approved equal.
- C. Primer: A primer shall be used at all locations in accordance with the manufacturer's instructions, with all primers being installed prior to the installation of any backer rod or bond breaker tape. Manufacturer shall be consulted for all surfaces not specifically covered in submittal application instructions.
- D. Backer Rod: Shall be closed cell polyethylene or polyurethane as recommended by the sealant manufacturer for compatibility with sealant.

- E. Bond Breaker Tape: Any acceptable polyethylene or similar type bond breaker tape shall be used to prevent three (3) sided adhesion in locations where backer rod cannot be used.

PART 3 – EXECUTION

3.01 JOINT SURFACE PREPARATION

- A. Remove all failed sealants and clean joint surfaces immediately before installation of sealant and caulking compounds. Remove dirt, insecure coatings, moisture and other substances which would interfere with the bond of sealant or caulking compounds.

3.02 INSTALLATION

- A. Where backer rod is required it shall be installed using only blunt instruments or rounded tools which will insure a uniform depth (+ or - 1/8") depth without puncturing the material. Backer rod shall be a minimum of 33% oversized for the joint to be sealed.
- B. Surrounding areas shall be protected to ensure that no sealant contaminates these surfaces.
- C. Sealant shall be installed in accordance with manufacturer's recommendations and instructions in order to insure proper width to depth ratio. Take all steps to prevent three (3) sided adhesion. Sealant depth shall be one half of joint width with a minimum depth of 1/4" and a maximum of 1/2" unless otherwise required by the manufacturer.
- D. Both temperature and dampness conditions may restrict application of these sealants. Comply with manufacturer's instructions.

END OF SECTION

DIVISION 08

WINDOWS AND DOORS

SECTION 08 70 00

FINISH HARDWARE

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01000 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Finish Hardware work required to complete the work of the contract including all the Finish Hardware work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all reinforcing, pinning, and finishes. Coordinate the Finish Hardware work with all the other trades for the project. Provide all demolition and disposal work to complete the Finish Hardware work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each Subcontractor, and each file sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Finish Hardware work includes, but is not limited to:
 - 1. Provide all hardware for the existing doors indicated.

2. Clean and polish all the hardware on the doors in the scope areas, both sides. This includes but is not limited to the handles, locksets, deadbolts, crash bars, hinges, and kick plates.

1.03 RELATED WORK SPECIFICIED ELSEWHERE

- A. Section 06 20 00 – Finish Carpentry.

1.04 QUALITY ASSURANCE

- A. Manufacturer: Obtain each type of hardware from a single manufacturer, although several may be indicated as offering products complying with requirements.
- B. Supplier: A recognized architectural finish hardware supplier, with warehousing facilities, who has been furnishing hardware for a period of not less than 5 years, and who is, or who employs an experienced architectural hardware consultant who is available to the Owner, Architect, and Contractor, at reasonable times during the course of the work, for consultation about the project's hardware requirements. It is the Hardware Supplier's responsibility to accurately furnish the proper sizes, weights, quantities, and functions as scheduled, as required by these Specifications and as recommended by the hardware manufacturer's catalogue information.

1.05 SUBMITTALS

- A. Product Data: Submit manufacturer's technical product data for each item of hardware. Include whatever information may be necessary to show compliance with requirements. Include instructions for installation and for maintenance of operating parts and finish.
- B. Schedules: Submit preliminary schedule at earliest possible date after notice of award of Contract. Hardware schedule shall be carefully coordinated with the Contract Documents and with the requirements of doors, frames and related work to ensure proper size, thickness, hand, function and finish of hardware. The schedule shall list the manufacturer's numbers, sizes, and installation location for all hardware required to complete the work. Organize hardware schedule into hardware test, parallel to the sets specified herein, indicating complete designations of every item required for each door or opening. Explain all abbreviations, symbols, codes, etc. used in schedule.
- C. Templates: Furnish all necessary templates and approved schedules required to fabricate doors, frames, and thresholds in sufficient time so as not to impede the progress of the work.

1.06 PRODUCT HANDLING

- A. All hardware shall be individually protectively wrapped/ packaged by the supplier, and in the same package shall be all screws, bolts, and fastenings necessary for proper installation. Group sets of hardware for each door. All hardware packages shall be legibly labeled indicating manufacturer's number, sizes, and hardware schedule reference number.

1.07 STANDARDS

- A. ANSI/BHMA Designations: Hardware shall comply with the requirements of the following standards.

Hinges:	ANSI A156.1, BHMA 101
Locks and Lock Trim:	ANSI A156.2, BHMA 601
Mortise Locks and Latches:	ANSI A156.13, BHMA 621
Exit Devices:	ANSI A156.2, BHMA 701
Door Controls - Closers:	ANSI A156.1, BHMA 301
Architectural Door Trim	ANSI A156.2, BHMA 1001
Template Hinge Dimensions:	ANSI A156.1
Control-Overhead Holders:	ANSI A156.2, BHMA 311
Materials and Finishes:	ANSI A156.18, BHMA 1301

1.08 KEYS AND KEYING

- A. Keying: Supplier shall meet with Owner to finalize keying requirements and obtain final instructions in writing. In general, keying shall match the Owner's existing system. Furnish the following quantities of keys:

Two (2)	Grand Master Keys (if required)
Five (5)	Master Key/Set
Three (3)	Change Keys/lock of cylinder

- B. Keys: Permanently inscribe each key with number of lock that identifies cylinder manufacturer key symbol, and notation "DO NOT DUPLICATE".

PART 2 – PRODUCTS

2.01 DOOR HARDWARE

- A. General: Produce hardware units of basic metal and forming methods indicated, using manufacturer's standard metal alloy, composition, temper and hardness, but in no case of lesser quality than specified for applicable hardware units by applicable ANSI A156 series standards. Do not substitute other materials or forming methods for those indicated, except as otherwise specified.
1. Fasteners: Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation. Do not provide hardware which has been prepared for self-tapping sheet metal screws, except as specifically indicated. Furnish screws for installations with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Finish of screws shall match hardware finish.
 2. Finish: In general, all hardware finish shall be Satin Brass to match existing.
 3. Tools and Instructions for Maintenance: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of finish hardware.
 4. Hardware supplier shall size and had all hardware on his hardware schedule, subject to approval of the architect.
- B. Deadbolt shall be mortise type, Schlage Le Series Primus 06n-626 with steel cases and forged brass fronts that are adjustable from flat to beveled.
1. Manufacturer: Schlage.
 2. Provide interchangeable core cylinders for all locking devices.
 3. Carefully prepare existing non-mortised door to receive mortised dead bolt.
- C. Surface mounted head/floor bolts shall be Ives SB453 surface bolt.
1. Carefully recess mortise bottom strike into terrazzo with epoxy. Drill hole so bolt can slide into the terrazzo 3/4" minimum.

END OF SECTION

DIVISION 08

WINDOWS AND DOORS

SECTION 08 80 00

GLASS AND GLAZING

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01000 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that the equipment to be furnished complete in every respect, and that this Contractor shall provide all equipment needed and usually furnished in connection with such systems to provide a complete installation. Equipment, materials, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Glass and Glazing work required to complete the work of the contract including all the Glass and Glazing work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all hardware, finishes, and accessories. Coordinate the Glass and Glazing work with all the other trades for the project. Provide all demolition and disposal work to complete the Glass and Glazing work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each sub-contractor, and each file Sub-Bidder for the entire project so that all the work can be properly and completely performed.
 - 1. At each existing lower exterior window sash in the Auditorium, remove the existing single piece of frosted glass and gaskets and install new 1/4" thick clear glass and gaskets. Carefully remove existing exterior aluminum mutton pattern and reinstall after the new glass is in place.

1.03 QUALITY ASSURANCE

- A. The following published specifications are hereby made a part of this SECTION.
 - 1. Federal Specification DD-G-451: Quality characteristics, thickness and dimensional tolerances of flat glass products.
 - 2. ANSI Z97.1: Standard for safety glazing material of all types.
 - 3. Consumer Product Safety Commission Standard 16 CFR1201: Category I or Category II as applicable.
 - 4. All work shall be done according to the Manufacturer's recommendations.

1.04 SHOP DRAWINGS

- A. Submit complete shop drawings in accordance with the provisions of the GENERAL CONDITIONS.
- B. Shop drawings shall include product literature on all glazing.

1.05 SAMPLES

- A. Submit the following samples in accordance with the provisions of the GENERAL CONDITIONS:
 - 1. One sample of each glass, 12" x 12" bearing the name of the manufacturer, thickness and quality of glass.
 - 2. Samples of glazing materials and sealants along with manufacturer's written description and directions for installation, if requested by Engineer.
 - 3. Sealant compounds and all other miscellaneous items.

1.06 GUARANTEE

- A. Manufacturer shall provide his standard guarantees for work under this Section. However, such guarantees shall be in addition to and not in lieu of all other liabilities which the manufacturer and Contractor may have by law or by other provisions of the Contract Documents.
- B. Glass: Low Emissivity (Low E) coated glass shall be warranted for a period of twenty (20) years.

PART 2 – PRODUCTS

2.01 GENERAL MATERIAL REQUIREMENTS

- A. All materials shall be free of defects impairing strength, durability, and appearance. All compounds, sealants, setting blocks and tapes shall arrive at the job in unopened containers and shall be used in strict accordance with the manufacturer's recommendations. It shall be the responsibility of the glazing subcontractor to provide glazing materials which are compatible with the materials used for setting blocks and spacer shims, and also compatible with the materials to be glazed.

2.02 GLAZING UNITS

A. LOW EMISSIVITY [LOW-E] COATING

1. Replacement window glass units shall have a soft coat low-e coating. Provide clear, non-reflective transparent metallic coated glass. Provide glass having the following characteristics

Visible Light Transmittance: 70% minimum.

Solar Heat Gain Coefficient: 0.37 maximum.

Winter Nighttime U-Value: 0.30 Btu/hr/sf/°F max.

2.03 GLAZING MATERIALS

- A. Glazing gaskets for the storefront replacement glass shall be extruded EPDM rubber to replace the existing materials on both sides of the glass and shall match the existing to fit the existing extrusions. Corner butt joints shall be sealed with glazing sealant prior to setting the glass.
- B. Glazing Sealant: Shall be a one part Silicone sealant, Pecora 864, Dow Corning 795, or equal. Primer shall be as recommended by manufacturer. Color shall be as selected by Architect.
- C. All glass shall be supported on silicone setting blocks 4"x1/4" minimum having a minimum durometer hardness of 70. All setting blocks shall be locked or sealed in place.

PART 3 – EXECUTION

3.01 INSTALLATION OF GLASS UNITS

- A. Glass shall be field installed.

- B. Where necessary, glass may be field glazed. Place setting blocks in sills and lock or seal setting blocks in place at the $\frac{1}{4}$ points of the glass.
- C. Install new glazing gaskets in full lengths and 4" longer than the frame to apply compression of the gasket as it is installed. Seal corner butt joints of the exterior gasket with glazing sealant
- D. Apply glazing materials and other materials in strict accordance with manufacturer's printed recommendations.
- E. Prior to reglazing the storefront frames, solvent clean all corners and any penetrations of the sills and seal with a bead of glazing sealant.
- F. Apply a bead of glazing sealant around the perimeter of all storefront units.
- G. Glass shall be set without springing with proper clearances at all edges. Edge clearance and tolerance shall be in accordance with recommendations of FGMA Glazing Manual, latest edition.

3.03 CLEAN-UP AND PROTECTION

- A. Clean up all debris resulting from this Work and clean off all marks and smudges, repair all damage, remove scratches and damaged materials and remove all debris from the job site. The Contractor shall be responsible for the protection of the windows, during the course of construction and shall also be responsible for cleaning all portions of the windows after the work is completed.
- B. The Contractor shall do all final cleaning of glass panes, leaving the glass and frames whole and free from rattle. The Contractor shall employ experienced workmen for the final cleaning of all work.
- C. Clean both sides of back piece of glass in each sash for both window assemblies. Therefore, there shall be four (4) sashes per window opening to be cleaned. Clean the frames inside and outside, as well.

3.07 CLEAN-UP

- A. The glazing Subcontractor shall remove all his shipping crates and waste material from the project.

END OF SECTION

DIVISION 09

FINISHES

SECTION 09 24 23

FURRING, LATHING, AND PLASTERING

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect Work of this Section whether or not such Work is specifically mentioned in this Section.
- C. Coordinate Work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the Work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Furring, Lathing, and Plastering Work required to complete the Work of the Contract including all the Furring, Lathing, and Plastering Work shown on the plans, listed in the specification, and needed to install a complete assembly in every way. Coordinate the Furring, Lathing, and Plastering Work with all the other trades for the project. Provide all demolition and disposal Work to complete the Furring, Lathing, and Plastering Work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All Work of the Contract is related. It is the General Contractor's responsibility to review all the Work of each section, each Subcontractor, and each file sub-bidder for the entire project so that all the Work can be properly and completely performed.
- B. Furring, Lathing, and Plastering Work includes, but is not limited to:
 - 1. Furnish and install the following items required to complete the work of this section as shown on the Drawings and specified herein.

2. Repair existing plaster walls and ceilings areas.
3. Install new plaster over existing metal lath.
4. Patch 1"-2" diameter holes in the ceiling of each coffer and in the "beams" between the coffers. There are 50 holes in each large coffer, 30 in each small coffer, and 10 in each leg of each beam.
5. Patch the beam between and adjacent to the coffers at the front edge of the balcony with cast plaster to match the detail of the existing coffer. See location shown on the plans.
6. Carry patching of ten (10) additional 12" x 12" areas throughout the project at the direction of the Architect.

1.03 RELATED WORK

- A. The following related work is to be performed under the designated Sections:
 1. Section 09 99 00, Painting.

1.04 SAMPLES

- A. Submit the following samples in accordance with the provisions of the GENERAL CONDITIONS.
- B. Samples shall include all materials specified herein with specified plaster finish.
- C. Provide mock-up test area of minimum 4 square feet for approval of each condition and each color.

1.05 PROTECTION

- A. All adjacent wood, metal glass, flooring, and other finished work shall be protected during progress of plastering and any damage done shall be made good in every respect under this Section.
- B. All manufactured materials shall be delivered in the original packages or containers bearing the name of the manufacturer and the brand. Plaster materials shall be kept off the ground, under cover and dry until ready for use.
- C. When plaster is to be mixed the areas so used shall be covered by 2 layers of reinforced waterproof paper. Maintain this coverage until equipment and materials are removed.

1.06 COOPERATION

- A. Cooperate with other trades on the project and plan to work to advantage in the general progress of the work without causing delay or doing work when conditions are not suitable for satisfactory work. Keep fully informed at all times as to the work of appurtenant trades and obtain all necessary information for the proper relation of the work to that of other trades.

1.07 INSPECTION

- A. Be responsible for the proper execution and performance of the work described herein. Inspect all surfaces and correct any conditions that may affect the work adversely. Commencement of work will be taken as unqualified approval of surfaces.

PART 2 – PRODUCTS

2.01 FURRING AND LATHING MATERIALS

- A. General: All furring and lathing materials for the project shall be of domestic manufacture and shall be the products of one manufacturer for any one system unless otherwise specified herein such as Gold Bond, U.S. Gypsum, Georgia-Pacific, or equal.
- B. Hanger Supports for concrete overhead shall be 1-1/2" x 1/8" x 6" galvanized steel bent straps. Straps to have 3/8" diameter hole not less than 3/8" from exposed end.
- C. Hangers shall be 1" x 1/8" galvanized steel.
- D. Hanger Bolts shall be 5/16" diameter, galvanized, of sufficient length, furnished complete with hex nut.
- E. Furring Channels shall be 3/4" channels weighing not less than 300 lbs. per 1,000 linear feet, and 1-1/2" channels weighing not less than 475 lbs. per 1,000 linear feet. All furring channels shall be galvanized.
- F. Tie Wire for securing furring channels together shall be 16 gauge monel or stainless wire.
- G. Tie Wire for securing metal lath shall be 18 gauge monel or stainless wire.
- H. Corner Beads shall be 26 gauge galvanized 3/16" radius nose bead with 1-1/2" wide expanded type flanges.
- I. Cornerites shall be 3" x 3" x 96" "sate-edge", 2.5 lb. flat expanded galvanized metal lath.

- J. Casings shall be 24 gauge galvanized steel similar to No. 16 expanded flange type, as manufactured by National Gypsum Company, U. S. Gypsum Company, Wheeling Steel Co., or equal. NOTE: Casings in conjunction with exterior stucco plaster shall be of solid zinc.
- K. Metal Lath for and interior plaster shall be 3.4 lb. galvanized diamond mesh lath.
- L. Strip Lath shall be 12" x 24", "safe-edge", 2.5 lb. flat expanded galvanized metal lath.
- M. Expansion Joints within plaster surfaces shall be formed by galvanized steel No. 40 expansion joint, as manufactured by Wheeling Steel, U. S. Gypsum, National Gypsum, or equal. NOTE: Expansion joints in conjunction with exterior stucco plaster shall be of solid zinc.
- N. Gypsum Lath shall be perforated, 3/8" thick, 16" wide, 8'0" long.

2.02 PLASTERING MATERIALS

- A. Sand shall be clean sharp bank sand, well-graded, free from foreign matter, conforming to ASTM C35.
- B. Water shall be potable, clean, and free from deleterious amounts of oils, salts, alkali, organic matter, and other harmful materials.
- C. Portland Cement shall conform to ASTM C150, Type I.
- D. Gypsum Neat and Fibered Plaster shall conform to ASTM C28.
- E. Cement Plaster shall be white gypsum plaster for extra hard finish, conforming to ASTM C61.
- F. Perlite for use as plaster aggregate, conforming to ASTM C35.
- G. Lime shall be hydrated finishing lime, conforming to ASTM C206 for finish coats.
- H. Waterproofing: All interior plaster base coats shall have the addition of water reducing, plasticizing admixture "Omicron" by Master Builders, "Toxement 1W" by Toch Bros., "Hydrocide" by Sonneborn, or equal.

2.03 MOLDING PLASTER MATERIALS

- A. SHEETROCK Brand Plaster of Paris by USG Corporation, or approved equal.
- B. Lime shall be hydrated finishing lime, conforming to ASTM C206 for finish coats.

FURRING, LATHING, AND PLASTERING

- C. Water shall be potable, clean, and free from deleterious amounts of oils, salts, alkali, organic matter, and other harmful materials.
- D. Molding plaster shall be mixed at eight (8) parts lime and one (1) part molding plaster.

PART 3 – EXECUTION

3.01 FURRING ERECTION

- A. The strap (flat bar) hangers shall be secured to the structure in a manner approved by the Architect.
- B. Hangers both straight and splayed shall be furnished and installed in such a manner that all of the following requirements are met:
 - 1. No hanger shall support more than 12 sq. ft. of ceiling area.
 - 2. Each main runner shall be supported along its length at spaces not exceeding 4'.
 - 3. No splay hanger shall be installed at an angle of more than 30 degrees from the vertical (60 degrees from the horizontal).
- C. Main runner channels shall be bolted, as approved by the Engineer, to hangers. Main runners shall be spaced not further than 3' apart.
- D. Main runners shall not be let into nor come in contact with abutting walls. Main runners shall be located within 6" of the walls in order to properly support the cross runner channels.
- E. Cross furring channels shall be spaced not over 12" apart and shall be securely saddle tied to main runners with double strand of 16 gauge tie wire.
- F. Grillage system shall be modified and reinforced with such additional supports, runners and furring as the Engineer may deem necessary in order to properly provide for interruptions of, or openings in, the plaster work as may be caused by mechanical items, electrical items, expansion joints, control joints, changes of direction, changes of material, or other similar conditions. Such work shall be installed at no additional cost and shall be in accordance with the best practices of the trade as approved by the Engineer.

3.02 LATH INSTALLATION

- A. Metal lath shall be applied over metal studs and metal furring, except self-furring lath.

- B. All metal lath shall be applied with long dimension of the sheet across the supports. Lath shall be attached to supports at maximum 6" centers and in strict accordance with manufacturer's best recommended practice.
- C. Self-furring lath shall be installed as plaster base for fireproofing of columns and beams per UL #X402.
- D. Prior to installation of lath, check installation of all mechanical and electrical work to ensure that all concealed work is properly in place.
- E. Furnish and install galvanized metal sleeves around all pipes passing through plaster work. Sleeves shall be so sized as to permit free expansion and movement of pipes.
- F. Secure all plaster rings and access panels furnished by other trades.
- G. Frame around all openings required for other trades and reinforce as necessary to make entire installation rigid and satisfactory to the Engineer.
- H. The ends of all lath shall be lapped not less than 1". If ends are made between supports they shall be adequately tied with 18 gauge tie wire. Sides of lath shall be lapped a minimum of 1/2".
- I. Expansion joints shall be installed in all exterior plastered soffits. Unless otherwise indicated on Drawings, such expansion joints shall be spaced 10' on center. All locations shall be verified with and approved by the Engineer before installation.
- J. Interior expansion joints, unless otherwise indicated on Drawings, shall be installed at a maximum spacing of 10' on center vertical on walls and in both directions on ceilings. NOTE: On masonry walls, expansion joints and control joints in plaster shall coincide one over the other.
- K. Where dissimilar materials are to serve as plaster base, such as concrete abutting masonry units or wire lath abutting concrete or masonry units, apply an 8" wide strip of wire at joints and secure to wire lath and wire ties and to concrete or masonry with 3/4" long hardened steel masonry nails.
- L. Casing beads shall be installed at all openings in plaster, at all places where plaster abuts another material, and elsewhere as detailed on the Drawings or as required by good practice.
- M. Install corner beads at all external angles and corner reinforcing at all internal angles where plaster runs through the angle.

FURRING, LATHING, AND PLASTERING

- N. Provide additional corner reinforcement at corners of all openings in plastered surfaces.

3.03 INSTALLATION OF GYPSUM LATH

A. General

1. Install face side out with long dimension perpendicular to supports.
2. Stagger end joints.
3. Butt pieces of lath snugly together.
4. Cut lath to fit neatly and snugly at angles and around items penetrating lath.
5. Minimum clearance of fasteners from edges and ends of lath: 3/8".
6. Install lath on metal supports with clips, self-tapping screws or tie wire in accordance with recommendations of lath manufacturer.
7. Install lath on wood supports with screws at 12" o.c. Do not nail or staple gypsum lath to framing members at interior angles.

3.04 VENEER PLASTER BASE

A. Single Layer Plaster Base Erection:

1. Apply plaster base vertically or horizontally. Position all edges over stud flanges for vertical application; all ends over stud flanges for horizontal application. To maintain a true surface plane, arrange direction of application so leading edge of base is attached first to open end of stud flange. Use maximum practical lengths to minimize end joints. Fit ends and edges closely, but not forced together. Stagger joints on opposite sides of partition.
2. For vertical application of base, space screws 12" o.c. in field of base and 8" o.c. staggered along vertical abutting edges. For horizontal base application, space screws 12" o.c. in field and along abutting end joints.

B. Double Layer Plaster Base Erection:

1. For screw attachment, space screws 16" o.c. for both layers. Apply both layers of plaster base vertically with joints in face layer offset from base layer joints. For 5/8" base, use 1" screws for base layer and 1-5/8" screws for face layer. For 1/2" base, use 7/8" screws for base layer and 1-5/16" screws for face layer.

FURRING, LATHING, AND PLASTERING

2. In double layer laminated construction attach base layer with 1" Type S screws spaced 8" o.c. at joint edges and 12" o.c. in field. Apply face layer vertically with joint compound taping or 90 spread on back side, joints staggered approximately 12" and fastened to base layer with 1-1/2" Type G screws. Drive screws approximately 2' from ends and 4' o.c. in field of panel, 1' from ends and 3' o.c. along a line 3" from vertical edges.

C. Ceiling Panel Installation:

1. Apply plaster base of maximum practical length face down with long dimension at right angles to furring channels. Position end joints over channel web and stagger in adjacent rows.
2. Fit ends and edges closely, but not forced together. Fasten base to channels with 1" Type S screws spaced 12" o.c. in field of base and along abutting ends and edges.

3.05 PLASTER APPLICATION

A. Interior Basecoat Work

1. Check all grounds, screens, casing, corner beads, cornerites, and stripites for proper application.
2. Mechanical mixer shall be cleaned of all set or hardened material before new material is loaded. Add materials while mixer is turning. No more materials shall be mixed than can be applied in one hour.
3. Mixing of materials shall be in accordance with manufacturer's printed instructions, which are hereby made a part of this Specification.
4. Basecoat plasters shall be proportioned and mixed in such a manner as to provide a minimum compressive strength of 750 psi dry.
5. Basecoat plasters shall be machine mixed in mechanical mixers specifically designed for this purpose.
6. Mix proportions and method of mixing shall be submitted to the Architect for approval prior to the start of the work.
7. Where plaster is to be applied directly to concrete or masonry units or brick, apply to these surfaces a liquid bonding agent brushed on in accordance with manufacturer's printed instructions.
8. Application of basecoat work shall be in two coats (scratch and brown) and the work shall be performed in a manner and left in condition suitable for the application of the third (finish) coat.

FURRING, LATHING, AND PLASTERING

9. The scratch (first) coat shall be applied with sufficient material and pressure to form good full keys on the metal lath or masonry surface, and then shall be cross raked. The brown (second) coat shall be applied after the scratch coat has set hard and firm, shall be brought out to grounds, and shall be straightened to a true surface with rod and darby without the use of additional water. The brown coat shall be left rough to receive finish (third) coat.
10. Scratch coat of plaster shall be applied to masonry or wire lath where ceramic tiles are to be installed using the mud bed method.

B. Interior Plaster Finish Coats

1. After completion of basecoat work the interior plaster finish coat shall be applied in accordance with manufacturer's recommendations and these Specifications.
2. Keene's cement finish coat plasters shall be mixed in proportion by dry weight of three parts of gauging plaster to one part lime in accordance with the manufacturer's directions.
3. Regular gypsum finish coat plaster shall be mixed in proportion by dry weight on one part gauging plaster to two parts lime in accordance with manufacturer's recommendations.
4. Finish coats shall be thoroughly scratched in and immediately doubled back to fill out a smooth, dense surface for decoration free of surface blemishes and irregularities. Thickness shall be 1/16" to 1/8". Finish shall be troweled until the material sets.

C. Portland Cement Plaster:

1. Portland cement plaster shall be mixed for brown and scratch coats as hereinbefore specified.
2. Scratch coat shall be full 1/4" thick and shall be applied with sufficient force to form good keys. Cross scratch coat upon attaining its initial set. Keep damp with fog spray for 72 hours.
3. Apply brown coat only after scratch coat has set at least 24 hours. After application, the brown coat shall be lightly scratched, broomed, and kept moist with fog spray for 72 hours and thence allowed to dry out.
4. Apply factory milled finish coat in accordance with manufacturer's recommendation only after brown coat has cured for 7 days. Just before application, wet brown coat again evenly with fog spray. Apply finish

coat moist with fog spray for at least 2 days, thereafter protect against rapid drying until properly thoroughly cured. Interiors shall have smooth finish. Make field sample for texture and color for approval of Engineer.

5. Total cement plaster thickness shall be 3/4".

3.06 MOLDING PLASTER APPLICATION

- A. Create sheet metal form reinforced by wood to replicate the exact profile of the damaged area of molding.
- B. Provide 4'-0" long mockup for approval by the Architect in advance of the full repair.
- C. Check all grounds, screens, casing, corner beads, cornerites, and stripites for proper application.
- D. Mechanical mixer shall be cleaned of all set or hardened material before new material is loaded. Add materials while mixer is turning. No more materials shall be mixed than can be applied in one hour.
- E. Mixing of materials shall be in accordance with manufacturer's printed instructions, which are hereby made a part of this Specification.
- F. Basecoat plasters shall be proportioned and mixed in such a manner as to provide a minimum compressive strength of 750 psi dry.
- G. Basecoat plasters shall be machine mixed in mechanical mixers specifically designed for this purpose.
- H. Mix proportions and method of mixing shall be submitted to the Architect for approval prior to the start of the work.
- I. Where plaster is to be applied directly to concrete or masonry units or brick, apply to these surfaces a liquid bonding agent brushed on in accordance with manufacturer's printed instructions.
- J. To repair a small hole or crack, brush or wipe area clean. Use sponge to water-dampen area to be patched. Fill crack or hole with SHEETROCK Brand Plaster of Paris, using a putty knife and finish flush with the surface. If the hole or crack is more than 1" wide or 1/4" deep, apply a base coat of plaster. Let this harden and apply a second coat flush with the surface.
- K. For best results, wet-sand with sponge. Wait until plaster is dry. Saturate sponge with water, wringing out only enough water to eliminate dripping. Rub area gently using a sweeping motion to remove high spots with as few strokes as possible. Clean sponge often. If dry sanding, use 120-grit or finer sandpaper.

FURRING, LATHING, AND PLASTERING

3.07 INSTALLATION - GENERAL

- A. In general, work shall conform to USA Standard Specifications for Interior Lathing and Furring, USAS A42.4-1967 and USA Standard Specifications for Gypsum Plastering, USAS A42.1-1964.
- B. The Plastering Subcontractor shall inspect job conditions and related work and report for the General Contractor conditions affecting lath and plaster work. Commencement of work will constitute acceptance of conditions.
- C. The Plastering Subcontractor is referred to the mechanical drawings and the Specifications for plumbing, heating, ventilating and air conditioning, and electrical work.
- D. Work under this Section shall be properly coordinated with the work of other Sections. In no case shall work of other Sections which is to be concealed by the work of this Section be so concealed until it has been inspected.
- E. Make all changes and adjustments in lath and all other work under this Section as needed to accommodate the work of other Sections and other subcontractors.
- F. Surfaces that are to receive plaster shall be clean and free of defects. Plaster screens and/or spot grounds shall be provided to assure that base coats be straight and plumb and of specified thickness. The trade designation "West Screed" shall be acceptable in lieu of "Metal Base Screens".

3.08 PATCHING

- A. Point up around trim and other work. Cut out and patch defective and damaged plaster. Patching shall match existing plaster in texture, finish and joining with plaster previously applied and shall be finished flush and in line with plaster previously applied.
- B. If, in the opinion of the Architect, the cutting and patching or the repair of damaged work is necessary as a result of improper performance on the part of another trade, then the furring, lathing and Plastering Subcontractor shall nonetheless perform the work but the costs thereof shall be paid by the trade whose actions had necessitated the work.

3.09 CLEANING

- A. Immediately upon completion of plastering in a specific area, remove the protective coating from metal doors and glazing frames.
- B. At completion of work, clean all plaster from beads, door frames, metal trim, etc., and leave work ready for decoration by others.

GYMNASIUM AND AUDITORIUM RESTORATION AT
SOUTH MIDDLE SCHOOL
WALTHAM, MASSACHUSETTS
CBI JOB NO.: 11066

CBI Consulting Inc.
Boston, Massachusetts
Tel: (617) 268-8977
Fax: (617) 464-2971

- C. Remove all rubbish from building site and leave floors broom clean daily.
Remove tools and equipment from the building and site daily.

END OF SECTION

DIVISION 09

FINISHES

SECTION 09 25 50

GYPSUM BOARD ASSEMBLIES

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Gypsum Board Assemblies work required to complete the work of the contract including all the Gypsum Board Assemblies work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all reinforcing, pinning, and finishes. Coordinate the Gypsum Board Assemblies work with all the other trades for the project. Provide all demolition and disposal work to complete the Gypsum Board Assemblies work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each sub-contractor, and each file sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Gypsum Board Assemblies work includes, but is not limited to:
 - 1. Install gypsum wallboard (GWB) which shall be taped, spackled, and sanded at all board.

1.03 RELATED WORK

A. The following related work is to be performed under the designated SECTIONS:

1. Section 05 40 00, Cold-Formed Metal Framing,
2. Section 07 92 13, Sealants and Caulking.

1.04 DEFINITIONS

A. Gypsum Board Construction Terminology: Refer to ASTM C 11 and GA-505 for definitions of terms for gypsum board assemblies not defined in this Section or in other referenced standards.

1.05 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 01 Specification Sections.
- B. Product Data for each type of product specified.
- C. Shop Drawings showing locations, fabrication, and installation of control and expansion joints including plans, elevations, sections, details of components, and attachments to other units of Work.
- D. Product certificates signed by manufacturers of gypsum board assembly components certifying that their products comply with specified requirements.

1.06 QUALITY ASSURANCE

- A. Single-Source Responsibility for Steel Framing: Obtain steel framing members for gypsum board assemblies from a single manufacturer, unless otherwise indicated.
- B. Single-Source Responsibility for Panel Products: Obtain each type of gypsum board and other panel products from a single manufacturer.
- C. Single-Source Responsibility for Finishing Materials: Obtain finishing materials from either the same manufacturer that supplies gypsum board and other panel products or from a manufacturer acceptable to gypsum board manufacturer.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.

- B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Neatly stack gypsum panels flat to prevent sagging.

1.08 PROJECT CONDITIONS

- A. Environmental Conditions, General: Establish and maintain environmental conditions for applying and finishing gypsum board to comply with ASTM C 840 requirements or gypsum board manufacturer's recommendations, whichever are more stringent.
- B. Room Temperatures: For non-adhesive attachment of gypsum board to framing, maintain not less than 40 deg F (4 deg C). For adhesive attachment and finishing of gypsum board, maintain not less than 50 deg F (10 deg C) for 48 hours before application and continuously after until dry. Do not exceed 95 deg F (35 deg C) when using temporary heat sources.
- C. Ventilation: Ventilate building spaces as required to dry joint treatment materials. Avoid drafts during hot, dry weather to prevent finishing materials from drying too rapidly.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
 - 1. Steel Framing and Furring:
 - a. Clark Steel Framing, Inc.
 - b. Dale Industries, Inc.
 - c. Marino/Ware (formerly Marino Industries Corp.).
 - d. Unimast, Inc.
 - 2. Gypsum Board and Related Products:
 - a. Domtar Gypsum.
 - b. Georgia-Pacific Corp.
 - c. National Gypsum Co.; Gold Bond Building Products Division.

GYPSUM BOARD ASSEMBLIES

d. United States Gypsum Co.

2.02 STEEL FRAMING FOR WALLS AND PARTITIONS

- A. Steel framing: Comply with requirements of Division 05, Section 05 40 00, Cold-Formed Metal Framing.

2.03 GYPSUM BOARD PRODUCTS

- A. General: Provide gypsum board of types indicated in maximum lengths available that will minimize end-to-end butt joints in each area indicated to receive gypsum board application.

1. Widths: Provide gypsum board in widths of 48 inches (1219 mm).

- B. Gypsum Wallboard: ASTM C 36 and as follows:

1. Thickness: ½ inch standard, in all areas outside baths.

2. Thickness: 5/8 inch Type – X fire rated at all one and two hour rated partitions.

2.04 JOINT TREATMENT MATERIALS

- A. General: Provide joint treatment materials complying with ASTM C 475 and the recommendations of both the manufacturers of sheet products and of joint treatment materials for each application indicated.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine substrates to which gypsum board assemblies attach or abut, installed hollow metal frames, cast-in-anchors, and structural framing, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of assemblies specified in this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Ceiling Anchorages: Coordinate installation of ceiling suspension systems with installation of overhead structural assemblies to ensure that inserts and other provisions for anchorages to building structure have been installed to receive ceiling hangers that will develop their full strength and at spacing required to support ceilings.

1. Furnish concrete inserts and other devices indicated to other trades for installation well in advance of time needed for coordination with other construction.

3.03 INSTALLING STEEL FRAMING, GENERAL

- A. Steel Framing Installation Standard: Install steel framing to comply with ASTM C 754 and with ASTM C 840 requirements that apply to framing installation.
- B. Install supplementary framing, blocking, and bracing at terminations in gypsum board assemblies to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction. Comply with details indicated and with recommendations of gypsum board manufacturer or, if none available, with United States Gypsum Co.'s "Gypsum Construction Handbook."
- C. Isolate steel framing from building structure at locations indicated to prevent transfer of loading imposed by structural movement. Comply with details shown on Drawings.
 1. Where building structure abuts ceiling perimeter or penetrates ceiling.
 2. Where partition framing and wall furring abut structure, except at floor.
 - a. Provide slip- or cushioned-type joints as detailed to attain lateral support and avoid axial loading.
 - b. Install deflection track top runner to attain lateral support and avoid axial loading.
 - c. Install deflection and firestop track top runner at fire-resistance-rated assemblies where indicated.
 - 1) Attach jamb studs at openings to tracks using manufacturer's standard stud clip.
- D. Do not bridge building control and expansion joints with steel framing or furring members. Independently frame both sides of joints with framing or furring members as indicated.

3.04 INSTALLING STEEL FRAMING FOR WALLS AND PARTITIONS

- A. Install runners (tracks) at floors, ceilings, and structural walls and columns where gypsum board stud assemblies abut other construction.
 1. Where studs are installed directly against exterior walls, install asphalt felt strips or foam gaskets between studs and wall.

GYPSUM BOARD ASSEMBLIES

- B. Installation Tolerances: Install each steel framing and furring member so that fastening surfaces do not vary more than 1/8 inch (3 mm) from the plane formed by the faces of adjacent framing.
- C. Extend partition framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing over frames for doors and openings and frame around ducts penetrating partitions above ceiling to provide support for gypsum board.
 - 1. Cut studs 1/2 inch (13 mm) short of full height to provide perimeter relief.
 - 2. For STC-rated and fire-resistance-rated partitions that extend to the underside of floor/roof slabs and decks or other continuous solid structural surfaces to obtain ratings, install framing around structural and other members extending below floor/roof slabs and decks, as needed, to support gypsum board closures needed to make partitions continuous from floor to underside of solid structure.
- D. Terminate partition framing at suspended ceilings where indicated.
- E. Install steel studs and furring in sizes and at spacings indicated.
- F. Install steel studs so flanges point in the same direction and leading edge or end of each gypsum board panel can be attached to open (unsupported) edges of stud flanges first.
- G. Frame door openings to comply with GA-219, and with applicable published recommendations of gypsum board manufacturer, unless otherwise indicated. Attach vertical studs at jambs with screws either directly to frames or to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
 - 1. Install 2 studs at each jamb, unless otherwise indicated.
 - 2. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch (12.7-mm) clearance from jamb stud to allow for installation of control joint.
 - 3. Extend jamb studs through suspended ceilings and attach to underside of floor or roof structure above.
- H. Frame openings other than door openings to comply with details indicated or, if none indicated, as required for door openings. Install framing below sills of openings to match framing required above door heads.

- I. Install thermal insulation as follows:
 - 1. Erect insulation vertically and hold in place with Z-furring members spaced 24 inches (610 mm) o.c.
 - 2. Except at exterior corners, securely attach narrow flanges of furring members to wall with concrete stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches (600 mm) o.c.
 - 3. At exterior corners, attach wide flange of furring members to wall with short flange extending beyond corner; on adjacent wall surface, screw attach short flange of furring channel to web of attached channel. Start from this furring channel with standard width insulation panel and continue in regular manner. At interior corners, space second member no more than 12 inches (300 mm) from corner and cut insulation to fit.
 - 4. Until gypsum board is installed, hold insulation in place with 10-inch (250-mm) staples fabricated from 0.0625-inch (1.6-mm) diameter tie wire and inserted through slot in web of member.

- J. Install polyethylene vapor retarder where indicated to comply with the following requirements:
 - 1. Extend vapor retarder to extremities of areas to be protected from vapor transmission. Secure in place with mechanical fasteners or adhesives. Extend vapor retarder to cover miscellaneous voids in insulated substrates, including those filled with loose mineral-fiber insulation.
 - 2. Seal vertical joints in vapor retarders over framing by lapping not less than 2 wall studs. Fasten vapor retarders to framing at top, end, and bottom edges, at perimeter of wall openings, and at lap joints; space fasteners 16 inches (400 mm) o.c.
 - 3. Seal joints in vapor retarders caused by pipes, conduits, electrical boxes, and similar items penetrating vapor retarders with vapor retarder tape.
 - 4. Repair any tears or punctures in vapor retarder immediately before concealing it with the installation of gypsum board or other construction.

3.05 APPLYING AND FINISHING GYPSUM BOARD, GENERAL

- A. Gypsum Board Application and Finishing Standards: Install and finish gypsum panels to comply with ASTM C 840 and GA-216.

- B. Install ceiling board panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in the central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
- C. Install gypsum panels with face side out. Do not install imperfect, damaged, or damp panels. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.
- D. Locate both edge or end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Avoid joints other than control joints at corners of framed openings where possible.
- E. Attach gypsum panels to steel studs so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- F. Attach gypsum panels to framing provided at openings and cutouts.
- G. Spot grout hollow metal door frames for solid-core wood doors, hollow metal doors, and doors over 32 inches (813 mm) wide. Apply spot grout at each jamb anchor clip and immediately insert gypsum panels into frames.
- H. Form control and expansion joints at locations indicated and as detailed, with space between edges of adjoining gypsum panels, as well as supporting framing behind gypsum panels.
- I. Cover both faces of steel stud partition framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases that are braced internally.
 - 1. Except where concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
 - 2. Fit gypsum panels around ducts, pipes, and conduits.
 - 3. Where partitions intersect open concrete coffers, concrete joists, and other structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by coffers, joists, and other structural members; allow 1/4- to 3/8-inch- (6.4- to 9.5-mm-) wide joints to install sealant.
- J. Isolate perimeter of nonload-bearing gypsum board partitions at structural abutments, except floors, as detailed. Provide 1/4 inch to 1/2 inch (6.4 mm to 12.7 mm) wide spaces at these locations and trim edges with U-bead edge trim where

edges of gypsum panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

- K. Floating Construction: Where feasible, including where recommended by manufacturer, install gypsum panels over wood framing, with floating internal corner construction.
- L. Where STC-rated gypsum board assemblies are indicated, seal construction at perimeters, behind control and expansion joints, openings, and penetrations with a continuous bead of acoustical sealant including a bead at both faces of the partitions. Comply with ASTM C 919 and manufacturer's recommendations for location of edge trim and closing off sound-flanking paths around or through gypsum board assemblies, including sealing partitions above acoustical ceilings.
- M. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's recommendations.
 - 1. Space screws a maximum of 12 inches (304.8 mm) o.c. for vertical applications.
- N. Space fasteners in panels that are tile substrates a maximum of 8 inches (203.2 mm) o.c.

3.06 GYPSUM BOARD APPLICATION METHODS

- A. Multilayer Application on Partitions/Walls: Apply gypsum board indicated for base layers and gypsum wallboard face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints. Stagger joints on opposite sides of partitions.
 - 1. On Z-furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.
- B. Single-Layer Fastening Methods: Apply gypsum panels to supports as follows:
 - 1. Fasten with screws.
 - 2. Fasten to wood supports with adhesive and supplementary nails or screws.

3.07 INSTALLING TRIM ACCESSORIES

- A. General: For trim accessories with back flanges, fasten to framing with the same fasteners used to fasten gypsum board. Otherwise, fasten trim accessories

according to accessory manufacturer's directions for type, length, and spacing of fasteners.

- B. Install corner bead at external corners.
- C. Install edge trim where edge of gypsum panels would otherwise be exposed. Provide edge trim type with face flange formed to receive joint compound, except where other types are indicated.
 - 1. Install L-bead where edge trim can only be installed after gypsum panels are installed.
 - 2. Install U-bead where indicated.
- D. Install control joints at locations indicated.

3.08 FINISHING GYPSUM BOARD ASSEMBLIES

- A. General: Treat gypsum board joints, interior angles, flanges of corner bead, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration.
- B. Prefill open joints, rounded or beveled edges, and damaged areas using setting-type joint compound.
- C. Apply joint tape over gypsum board joints, except those with trim accessories having flanges not requiring tape.
- D. Apply joint tape over gypsum board joints and to flanges of trim accessories as recommended by trim accessory manufacturer.
- E. Levels of Gypsum Board Finish: Provide the following levels of gypsum board finish per GA-214.
- F. Use the following joint compound combination as applicable to the finish levels specified:
 - 1. Embedding and First Coat: Setting-type joint compound. Fill (Second) Coat: Setting-type joint compound. Finish (Third) Coat: Sandable, setting-type joint compound.

3.09 INSULATION

- A. Fiberglass sound attenuation batt insulation shall be installed loose by friction fit. Cut long enough to fill entire void between and at ends of studs. Fill any gaps and holes with small pieces of insulation. Do not crush. Carefully fit around light fixtures and junction boxes.

3.10 CLEANING AND PROTECTION

- A. Promptly remove any residual joint compound from adjacent surfaces.
- B. Provide final protection and maintain conditions, in a manner acceptable to Installer, that ensure gypsum board assemblies are without damage or deterioration at the time of Substantial Completion.

END OF SECTION

DIVISION 09

FINISHES

SECTION 09 64 40

WOOD FLOORING

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Wood Flooring work required to complete the work of the contract including all the Wood Flooring work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all reinforcing, pinning, and finishes. Coordinate the Wood Flooring work with all the other trades for the project. Provide all demolition and disposal work to complete the Wood Flooring work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each sub-contractor, and each file sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Wood Flooring work includes, but is not limited to:
 - 1. Repair existing athletic wood flooring system in Gymnasium and Auditorium. Contractor shall carry 10 small individual patches of 12" x 12" in the field of the gym floor and 10 small individual patches of 12" x 12" in the field of the auditorium floor at locations directed by the

Architect in the base scope. Contractor shall also carry an area of 8'-0" x 10'-0" patch as well.

2. All accessories required for installation.
3. Install as per manufacturer's recommendation.

1.03 RELATED SECTIONS

- A. Section 06 10 00, Rough Carpentry.

1.04 REFERENCES

- A. Maple Flooring Manufacturers Association (MFMA).
- B. APA- The Engineered Wood Association [former American Plywood Association (APA)].
- C. Canadian Lumberman's Association (CLA).
- D. Deutches Institut fur Normung (DIN).
 1. DIN Standards 18032, Part 2.

1.05 SYSTEM DESCRIPTION

- A. Patch the wood flooring system consisting, in general, maple flooring dutchmen, complete sanding and refinishing, and painted game lines.

1.06 SUBMITTALS

- A. Product data, including manufacturer's information for specified products
- B. Selection and verification samples for finishes, colors and textures.
- C. Shop drawings showing layout, profiles, product components and finishing details. Complete game line layout plan with dimensions and colors.
- D. Installation and maintenance instructions as published by the manufacturer.
- E. Installer qualifications and experience.

1.07 QUALITY ASSURANCE

- A. Installer must have performed 5 (five) installations of the same scale in the last three years.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Materials must be delivered in manufacturer's original, unopened and undamaged containers with identification labels intact.
- B. Store material protected from exposure to harmful weather conditions, on a clean, dry, flat surface protected from all possible damage.
- C. Recommended environmental conditions for storage are a relative temperature in the range of 65° F to 75° F (18° C to 24° C), and ambient humidity in the range of 35% to 50%.
- D. Material shall be stored in the area where the installation is to take place, a week (7 days) prior to installation, so that it can acclimate to area conditions.
- E. Material should not suffer excessive damage during handling (i.e. edge chipping, excessive warping etc).

1.09 SITE CONDITIONS

- A. Maintain stable room environmental conditions for a period of seven (7) days prior, during and seven (7) days after installation.
 - 1. Recommended temperature range: 65° F to 75° F (18° C to 24° C).
 - 2. Recommended relative humidity range: 35% to 50%.
 - 3. Store material in gym space for a minimum of 15 days to acclimate to actual environmental conditions.
- B. Installation of wood flooring will not commence unless all other finishes in the building have been completed and the HVAC systems are operational and able to sustain stable environmental conditions (as specified).

1.10 WARRANTY

- A. Provide manufacturer's standard warranty.
- B. The athletic wood flooring is warranted to be free from manufacturing defects for a period of one (1) year from the date installation date (substantial completion date).

1.11 MAINTENANCE AND REPAIR

- A. Provide additional amount of approximately 1% of the total floor surface, of each type.

- B. Repair material must be from the same lot as material supplied for initial installation.
- C. Maintain surface as per MFMA published recommendations for wood floor maintenance.

PART 2 – PRODUCT

2.01 MAPLE FLOORING

- A. Description
 - 1. Flooring shall be continuous tongue & groove, end-matched MFMA Northern Hard Maple, graded marked and stamped by manufacturer. Size to match existing 2¼” width various lengths, 24” minimum length.

2.02 MATERIAL

- A. Provide wood flooring system (as specified in subsection 2.2.1).
- B. Provide flooring fasteners to be 2” (51 mm) barbed cleat or 15 gauge coated staples.
- C. Provide Finishing material to be specified by Architect and applied according to manufacturer’s specifications.

2.03 POLYURETHANE FINISH

- A. Provide two coats of sealer at entire wood floor “Sport Seal” by Bona Sport or approved equal.
- B. Provide two coats of finish at entire wood floor “Sport Poly” by Bona Sport or approved equal. Line paint shall be applied between the second and third coats.
- C. Lines for each game shall be “4000 Series” industrial coating by Sherwin Williams, or approved equal. Provide a different color for each game. Colors from the manufacturer’s standard line of colors shall be selected by the Owner.

PART 3 – EXECUTION

3.01 INSTALLERS

- A. Refer to section 1.7 of this document for information on installers.

3.02 EXAMINATION AND PREPARATION

The following must be ensured prior to installation of the primary product:

- A. Secure existing folding wood partition. Remove wood floor planks at track system and fill in with maple floor material 4½" wide.
- B. The beginning of installation stipulates the acceptance of surface and site conditions.
- C. Installation shall not be carried out unless above conditions are satisfied.
- D. Report any discrepancies to the Architect for correction.

3.02 INSTALLATION

A. Floor System

- 1. Install sub-floor/blocking to support new maple flooring at each patch location.
- 2. Install maple flooring, over sheathing, by power nailing, or stapling, approximately 12" (305 mm) o.c. each way with end joints properly driven up.
- 3. If required, size joints between flooring strips to allow for intermediate expansion in accordance with local humidity conditions.
- 4. Provide 1 ½" to 2" (38 mm to 51 mm) expansion voids at perimeter and at all vertical obstructions.

B. Sanding

- 1. Machine drum sand with course, medium, and fine sand paper to achieve a smooth, even and uniform surface ready for finish.
- 2. Remove sanding dust from entire surface by vacuum and tack.
- 3. Refer to MFMA sanding guide for procedures.

C. Finishing

- 1. Inspect entire area of the floor to insure that the surface is acceptable for finishing, and is clean and completely free from sanding dust.

2. Apply two (2) coats of approved oil modified polyurethane seal and two (2) coats of approved oil modified polyurethane finish per manufacturer's instructions.
3. Buff and clean floor between each coat.
4. Apply game lines on Gymnasium floor accurately in accordance with drawings and layouts provided by Architect. Lines shall be straight with sharp edges. Apply between seal and first coat of finish.
5. Refer to MFMA finishing guide for procedures.
6. Allow for sufficient time (as specified by MFMA) prior to cleaning surface.

END OF SECTION

DIVISION 09

FINISHES

SECTION 09 65 00

RESILIENT FLOORS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01000 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Resilient Floors work required to complete the work of the contract including all the Resilient Floors work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all reinforcing, pinning, and finishes. Coordinate the Resilient Floors work with all the other trades for the project. Provide all demolition and disposal work to complete the Resilient Floors work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each sub-contractor, and each filed sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Resilient Floor work includes, but is not limited to:
 - 1. Install 1' x 1' vinyl composition tiles on the existing wheelchair ramp. Scribe tiles carefully to the adjacent wall surface to eliminate need for a baseboard.

2. Provide all vinyl transition strips between the vinyl tile and all existing floor finishes, and between the vinyl tile and other new floor finishes.

1.03 RELATED WORK

- A. The following related work is to be performed under the designated SECTIONS:
 1. Section 09 90 00, Painting.
 2. Section 09 25 50, Gypsum Board Assemblies.

1.04 SAMPLES

- A. Submit the following samples in accordance with the provisions of the GENERAL CONDITIONS:
 1. Resilient Tiles: Two sets of tiles, treads, pattern and thickness specified and in all colors required. Match existing colors where installation occurs at existing tile.
 2. Vinyl cove base: Two 1'-0" long sections of each color specified or required to match the existing in existing spaces.
 3. Adhesives, Mastics, Crack Fillers, Primer Cleaners, Polishers, etc.
 4. Leveling Compound Sample.

1.05 EXAMINATION OF SURFACES

- A. Examine all surfaces to receive resilient flooring to see that they are in proper condition to receive the work to be performed under this SECTION. Report to the Engineer in writing any surfaces that are not acceptable. Starting of work in any area shall constitute acceptance of such surface as being satisfactory, and any defects resulting from use of such accepted surface shall be corrected by resilient flooring subcontractor at no additional expense to the Owner.

PART 2 – PRODUCTS

2.01 TILE

- A. Imperial Excelon vinyl composition tile as manufactured by Armstrong or approved equal.

2.02 ADHESIVES AND UNDERLAYMENTS

- A. Adhesives shall be type and brand recommended by manufacturer for each of the various conditions and flooring materials. Where manufacturer lists more than one recommended adhesive, the manufacturer's "preferred choice" shall be used.
- B. Mastic underlayments for use at wood floors shall be latex type recommended by flooring manufacturer.
- C. Crack filler shall be as recommended by flooring manufacturer such as: Armstrong "S-190", Flintkote "Crack Filler", or Kentile "Fast Kenpatch No. 13", or approved equal. Crack filler shall be installed under this Section.
- D. Primers for use for all the various conditions and materials shall be as recommended by manufacturer of each specific material for each specific application.
- E. Contractor shall provide exhaust ventilation in each room to exhaust adhesive fumes during installation to the satisfaction of the Owner and Engineer.

2.03 MAINTENANCE SUPPLY

- A. Furnish to Owner additional standard cartons equal to 1% of each different color type and pattern of tile used on the project and from same manufacturing runs. At completion of work, deliver to site and place in storage areas designated by Official in properly labeled cartons, receipt of which shall be acknowledged in writing by authorized representative of Owner.

2.04 CLEANERS AND POLISHES

- A. Floor Cleaner: Shall be a commercial floor cleaner such as: Armstrong "C-410", Flintkote "Floor Cleaner", Hillyard's "Super Shine-All", or approved equal.
- B. Floor Polish: Shall be commercial floor finish such as: Armstrong "C-145", Flintkote "Floor Finish", or Hillyard's "Polykote", or approved equal.

2.05 LEVELING COMPOUND

- A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.

PART 3 – EXECUTION

3.01 DELIVERY AND STORAGE

- A. Deliver all materials to job in unopened containers with manufacturer's brand name clearly marked thereon.
- B. Store all materials to protect them from moisture and extremes of heat and cold.

3.02 PREPARATION OF SURFACES

- A. Fill all cracks in subsurfaces using approved crack filler in accordance with manufacturer's printed instructions. Clean subfloors of all remaining dirt and loose particles before application of flooring materials.

3.03 INSTALLATION

- A. Do not begin installation until work of other trades, including painting, has been substantially completed. Use only experienced workmen. Adhere strictly to printed instructions of manufacturer of the materials. Refer to Architect for decisions in case of conflicts.
- B. Room temperature in any area where tile is being installed shall be maintained at a temperature of not less than 68 degrees F. from 48 hours prior to commencement of the work to at least 48 hours after its completion. Refer to Section 01 50 00, TEMPORARY FACILITIES, for information regarding temporary heating.
- C. Lay tile square to match existing patterns.
- D. Lay resilient flooring so as to insure full uniform contact with base material and to produce finished surfaces which are smooth, even, and in true planes, free of buckles, waves, and other imperfections. Store and use adhesives in accordance with manufacturer's printed instructions.
- E. Fit flooring neatly into breaks and recesses, against bases and thresholds, and around pipes, columns, and other projections. Cut, fit, and scribe borders after application of field tile.
- F. Replace damaged edge strips where resilient flooring materials terminate at points higher than continuous finished flooring.
- G. Clean off surplus adhesive from flooring and adjacent surfaces.
- H. Adjust tiles that have not been seated level with surrounding tiles in manner recommended by manufacturer.

- I. Replace tile showing broken corners or fracture lines by warming tile, carefully removing and replacing with new tile of same type, color, pattern, and thickness, all at no extra expense to the Owner.
- J. All resilient flooring materials shall be carefully rolled after application to eliminate all buckles, air pockets, etc. Do not shorten manufacturer's required rolling time.

3.04 CLEANING, POLISHING, AND PROTECTION

- A. After installation, allow resilient materials to set overnight before initial cleaning. Clean resilient materials by damp mopping, followed as soon as dry with the application of a light coat of commercial buffable floor polish or specified type, strictly following manufacturer's printed instructions. Take care not to flood the surface. Except for initial cleaning and polishing, allow resilient materials to set without traffic for at least 5 days after installation.
- B. General Contractor will install protective covering over completed surfaces.
- C. Final waxing just prior to project acceptance will be done by General Contractor.

3.05 GUARANTEE

- A. All work, materials and labor performed under this SECTION shall be guaranteed in writing to the Owner by the Contractor and manufacturer for a period of one year, all in accordance with the requirements of PART A.

END OF SECTION

DIVISION 09

FINISHES

SECTION 09 99 00

PAINTING

Filed Sub-Bid Required
Painting

PART 1 - GENERAL

1.00 FILED SUB-BIDS

- A. PAINTING is stipulated as a Filed Sub-Bid under Part B, Item 2, of the FORM FOR GENERAL BID.
- B. All sub-bids shall be submitted on the FORM FOR SUB-BID furnished by the Awarding Authority as required by Section 44G of Chapter 149 of the General Laws, as amended.
- C. Sub-bids must be filed with the Awarding Authority in a sealed envelope, before 10:30 AM, local time, on the date stipulated in the ADVERTISEMENT.
- D. Specific information relating to sub-bidders is set forth in the CONTRACTS DOCUMENTS under the heading, "NOTICE TO ALL BIDDERS", and the attention of the sub-bidders is directed thereto.
- E. The work to be done under this Section 09 99 00 is described herein and on Drawings D1-01-D3-01, A1-01-A5-01, E0.1-E2.1.

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces.

Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Painting work required to complete the work of the contract including all the Painting work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all reinforcing, pinning, and finishes. Coordinate the Painting work with all the other trades for the project. Provide all demolition and disposal work to complete the Painting work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each sub-contractor, and each file sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Painting work includes, but is not limited to:
1. Paint all existing plaster walls, coffers, and ceilings (all surfaces) in the auditorium. All exposed wood surfaces shall remain unpainted. Paint the CMU walls of the Gymnasium (The lower 8'-0" of the CMU has been previously painted. The CMU above has never been painted).
 2. Paint exposed steel joist roof structure, exposed metal deck, and the entire HVAC system including the equipment, ductwork, piping, etc. in the Gymnasium.
 3. Paint all other items indicated on the plans and all items that should receive a coating to protect it from deterioration.
 4. Achieve full coverage on all items to be painted. Number of coats listed, below, is a minimum. Full coverage is achieved when the color below is no longer visible. Tint the first two coats slightly to be different in order to see coverage. Do not proceed with subsequent coats until the previous coat has been reviewed and approved by the Architect.
 5. Gym shall have wall colors and a door frame color.
 6. Auditorium shall have two (2) wall colors and two (2) ceiling coffer colors. The stage walls shall be a different color as well.

1.03 SUBMITTALS

- A. Submit the following shop drawings in accordance with the provisions of SECTION 01 31 00 - SUBMITTALS in the general requirements.

1. Manufacturers literature on each product used.
- B. Submit the following samples in accordance with the provisions of SECTION 01 31 00 - SUBMITTALS in the general requirements.
 1. 12" x 12" section of each surface with complete paint finish in each color including all tints.

1.04 QUALITY ASSURANCE

- A. Provide at all times during the work of this Section adequate supervisory personnel who shall be thoroughly familiar with the type of construction involved and with the requirements of the Contract Documents pertinent to this Work. Provide adequate numbers of skilled craftsmen and other personnel to ensure the orderly and proper progress of the Work in accordance with the approved Progress Schedule.
- B. Comply with the Codes and Standards of the Steel Structures Painting Council.

PART 2 – PRODUCTS

2.01 PAINT

- A. All paints to be by Benjamin Moore, Pratt & Lambert, Sherwin Williams brand or approved equal. Specification is based on the Benjamin Moore brand but may be by an approved equal.
- B. Drywall/Plaster
 1. Primer for drywall surfaces to be Ironclad Alkyd Low Luster Metal & Wood Enamel (163)
 2. Finish (2 coats) for interior surfaces to be Impervo Alkyd High Gloss Metal and Wood Enamel (133).
- C. CMU Walls
 1. Moorcraft Super Craft Latex Block Filler (285) primer. Apply two (2) coats to fill all the voids in the block finish.
 2. Two (2) finish coats shall be I.M.C. Urethane Alkyd Gloss Enamel (M22) in High Gloss finish.
- D. Metal
 1. Metal surfaces to be primed with Iron Clad Alkyd Low Luster Metal and Wood Enamel (163).

2. Finish coats shall be Impervo Alkyd High Gloss Metal and Wood Enamel (133).

PART 3 – EXECUTION

3.01 SURFACE PREPARATION

- A. Install all paint as per the manufacture's written recommendations.
- B. New Drywall/Plaster:
 1. Remove surface dirt and grit with a detergent solution followed by a thorough rinsing with clear water. Allow surface to dry completely before coating.
 2. Prime all drywall/plaster.
- C. Drywall/Plaster Surfaces.
 1. On existing finished surfaces to be repainted, remove all loose, blistered, or cracked finish to bare substrate.
 2. To remove loose prior coatings use methods such as scraping, wire brushing. Where scraping or wire brushing rinse thoroughly.
 3. Sand smooth or feather all rough edges.
 4. Lightly sand or etch all glossy painted surfaces.
 5. Where new work joins existing work, prepare existing surfaces to nearest break in the plane.
 6. Wash surfaces with detergent and water or other solution as required to remove any accumulated dirt, oil, grease, or other foreign matter which would impair bond or bleed through new finishes.
 7. After washing rinse with water and allow to dry thoroughly.
 8. Prime all bare surfaces.

3.02 APPLICATION TO DRYWALL, PLASTER, AND MASONRY

- A. Apply paint by methods generally accepted by the trade to achieve approved results.

- B. Do not apply finishes on surfaces that are not sufficiently dry. Make sure each coat of finish is dry and hard before following coat is applied unless manufacturer's direction states otherwise.
- C. Prime all surfaces before installation by other trades.
- D. Brush on oil-based paints with a high quality natural bristle brush.
- E. Apply two finish coats.

3.03 APPLICATION TO METAL

- A. Apply paint as per manufacturer's recommendations and by methods generally accepted by the trade to achieve approved results. Full coverage will be achieved when the color of the coat of paint below is no longer visible.
- B. All work shall be performed in the shop by qualified personnel under controlled conditions for dust, temperature and humidity. Provide sufficient lighting.
- C. Prime all prepared bare metal surfaces.
- D. Apply two finish coats.

3.04 PROTECTION

- A. The contractor is responsible for protecting the finish after coating.
- B. Touch-up scrapes, scratches and any other mar in the finish as required after installation as per this specification.
- C. If Consultant determines that the paint finish has been damaged by the contractor, beyond repair by touch-up, the entire section shall be re-finished as per this specification and at no additional cost to the Owner.

END OF SECTION

DIVISION 11

EQUIPMENT

SECTION 11 66 00

ATHLETIC EQUIPMENT

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Athletic Equipment work required to complete the work of the contract including all the Athletic Equipment work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all reinforcing, pinning, and finishes. Coordinate the Athletic Equipment work with all the other trades for the project. Provide all demolition and disposal work to complete the Athletic Equipment work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each sub-contractor, and each file sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Athletic Equipment work includes, but is not limited to:
 - 1. Provide and install divider curtains.
 - 2. Provide and install electronic scoreboard.
 - 3. Provide and install wall pads.

1.03 SUBMITTALS

- A. Submit in accordance with Section 01 30 00 - Submittals.
 - 1. List of proposed products and product data.
 - 2. Shop drawings showing layout, elevations, dimensions, fabrication details, method of attachment, loads to be transmitted to building structural members, requirements for supplementary bracing or structural support members and electrical wiring diagrams.
 - 3. Manufacturer must provide calculations and reports for tests performed by an independent testing laboratory accredited by the American Association of Laboratory Accreditation (A2LA) that clearly demonstrate compliance with minimum safety factors included in product specifications.
 - 4. Samples of fabric/vinyl for selection by Architect.
 - 5. Manufacturer's installation and maintenance instructions.

1.04 QUALITY ASSURANCE

- A. Source limitation: All components including suspension system and frame assembly shall be of a single manufacturer.
- B. All welding to be performed by personnel having passed Welder Qualification testing in accordance with American Welding Society (AWS) code D1.1 or higher. Manufacturer to provide certification and test results upon request.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Provide curtain components in accordance with requirements of related trades that are responsible for installation.

1.06 WARRANTY

- A. All support structures including clamps, fittings and tube to have a minimum warranty of 25 years from date of substantial installation. Warranty for other items to be as indicated in product specifications.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Curtain manufacturer may be by Draper, Inc., Porter Athletic Co., Carron Net Co., Inc., Stanek Netting, or approved equal.

- B. Scoreboard manufacturers may be by Varsity, Electro-Mech, Nevco, Scoreboards, or approved equal.
- C. Wall Pad manufacturer may be by Draper Shade and Screen Company, Inc., or approved equal.
- D. Manufacturers of equivalent products submitted and approved in accordance with Section 01 30 00 Submittals.

2.02 GYMNASIUM DIVIDER CURTAINS

- A. Main Gym Divider.
 - 1. Walk-Draw Curtain.
 - a. Type: Manually operated, Walk-Draw gymnasium divider including clamps for attachment to building structure, and other components required for complete functional installation.
 - b. Operation: Curtain moves by rolling along a track.
 - c. Configuration: Rectangular shape with straight bottom and extending across room as indicated on Drawings.
 - 1) Stack space for stored divider: 1 1/8 inch [28 mm] of stacking distance per lineal foot.
 - 2) Minimum required clearance for curtain on each side of the track: 6 inches [152 mm].
 - d. Track: Heavy-duty 16 ga. galvanized steel, 1 1/2 inch [38 mm] x 1 1/4 inch [31 mm].
 - e. Attachment: Attach to structural or supplemental support with beam clamps, track hanger brackets. Support assemblies spaced at approximately 8 feet [2.4 m] on center.
 - f. Carriers shall be 1 1/8 inch [28 mm] diameter ball bearing wheels spaced 12 inches [304 mm] on center.
 - g. Divider bottom: Pocket shall be formed along bottom edge of the curtain to accommodate No. 2/0 coil proof chain.
 - h. Curtain Material
 - 1) Bottom 3 feet [1 m]: Opaque solid vinyl coated polyester fabric:

- i) Weight: 18 ounces per square yard.
 - ii) Resistant to rot, mildew, fungus and ultraviolet light.
 - iii) Flammability: Rated self-extinguishing in accordance with California State Fire Code F-230. Class A Rated in accordance with requirements of NFPA-101.
 - iv) Color: Selected by Architect from manufacturer's standard range.
- 2) Upper curtain section: Vinyl coated polyester mesh.
- i) Weight: 9 ounces per square yard.
 - ii) Resistant to rot, mildew, fungus and ultraviolet light.
 - iii) Flammability: Rated self-extinguishing in accordance with California State Fire Code F-230. Class A Rated in accordance with requirements of NFPA-101.
 - iv) Color: Selected by Architect from manufacturer's standard range.
- 3) VOC Emission: Divider Curtain Vinyl and Mesh to be low emitting and certified to meet all of the requirements of the GREENGUARD Children & Schools and GREENGUARD certification program. GREENGUARD Children & Schools requires emissions of total volatile organic compounds = 0.22 mg/m³, formaldehyde = 0.0135 ppm, total aldehydes = 0.043 ppm, individual volatile organic compounds = 1/1000 TLV and = ½ chronic REL and total phthalates = 0.01 mg/m³. Vinyl and Mesh must be evaluated to indoor air quality evaluation (IAQ) using a GREENGUARD product evaluation protocol following the requirements of The GREENGUARD Environmental Institutes (GEI) Product Certification Program, ASTM Standard D5116 and the United States Environmental Protection Agency and modeled based on GEI requirements for a standard gymnasium loading and ASHRAE 62.1 – 2004 ventilation conditions.

Manufacturer to provide certificate and/or test results upon request.

- 4) Seams: Vertical and electronically welded with 1 inch [25 mm] full contact weld.
- 5) Outer edge hems: Triple turned with double welds.
- 6) Top edge: Solid fabric in triple thickness and double welded to mesh. Grommets located 12 inch [304 mm] on center, rolled rim spur type.

2.03 SCOREBOARD AND TIMER

A. Main gym wireless LED scoreboard.

1. The scoreboard shall display period time to 99:99, HOME and GUEST scores to 199, PERIOD to 9, PLAYER number to 99, FOUL to 9, PLAYER PTS to 99, team FOULS to 99, T.O.L. (Time Outs Left) to 9, and indicate POSSESSION and BONUS. When the period time falls below one minute, the scoreboard shall display time to tenths of a second. The scoreboard color will be selected by Owner and striping is standard.
2. Product Safety Approval:
 - a. All models: ETL listed, tested to UL 48:1996 and CAN/CSA – C22. No. 207-M89.
3. Dimensions:
 - a. Minimum 4'-0" height, minimum 8'-0" width.
4. Weight:
 - a. Maximum 200 lbs., attach to existing CMU walls.
5. Power:
 - a. Available in 120 VAC.
6. Construction:
 - a. Steel or aluminum alloy 5052, conforms to federal specification QQ-A-250/8.

7. Digits/Indicators:
 - a. Nominal digit size for TIME, HOME, and GUEST scores are 15" (381mm) high. PERIOD, FOULS, PLAYER, FOUL, and PTS have a nominal digit size of 11" (279mm). T.O.L. are displayed with 8" (203 mm) digits. All digits to be RED in color and feature 180-degree viewing angle.
8. Captions:
 - a. HOME and GUEST captions are 8" (203 mm) high. All other captions are 5" (127mm) high. All captions are white vinyl applied directly to the display face. Other caption colors are available.
9. Cabinet Finish:
 - a. Scoreboards are finished with powder coat.
10. Operating Temperatures:
 - a. Scoreboard: -22 to 122 degrees Fahrenheit (-30 to 50 degrees Celsius).
 - b. Console: 32 to 122 degrees Fahrenheit (0 to 50 degrees Celsius).
11. Wireless Control Console:
 - a. The control console is housed in a durable stainless steel case. Console has a 40-character liquid crystal to recall and verify information being displayed on the scoreboard. The control console may be operated on 120 VAC or an optional 12 VDC battery. The standard power cord included with the control console is six (6) feet long. Maximum power demand is 4 watts. 2.4 GHz spread spectrum radio.
12. Junction Box:
 - a. A cover plate with a mounted connector and a standard 2" x 2" x 4" (51 mm x 51 mm x 102mm) outlet box is factory pre-wired when two lengths of cable are ordered for a standard installation.
13. Horn:
 - a. The horn sounds automatically when the period time counts down to zero or can be manually sounded by the operator. The horn is a vibrating type located behind the face of the scoreboard.

14. Synchronization:
 - a. The scoreboard can operate in conjunction with all other manufacturers' shot clocks.
15. General Information:
 - a. Scoreboard is capable of timing and scoring for teams. 100% solid state electronics housed in an all steel or aluminum cabinet. Scoreboard comes complete and ready to install. Hanging brackets are supplied.
16. Warranty:
 - a. Warranty on scoreboard and control console for five years. Warranty includes cost of labor and parts for repairs made by other authorized factory personnel. Costs to be covered by original manufacturer.

2.04 WALL PROTECTION PADS

- A. Type: Fabric covered foam wall protection pads; Class A Flame Retardant Wall Pads as manufactured by Draper Shade and Screen Company, Inc., or approved equal. Draper, Inc., 411 South Pearl Street, Spiceland, IN 47385-0425, 765-987-7999, as per ASTM-E84 and NFPA 255 test procedures.
- B. Pad shape and size: Sizes and shapes as indicated on Drawing Elevations.
 - 1 Flat, rectangular pads: 24 by 72 inches. Provide rectangular cut outs for all door hardware.
- C. Cushioning material: 2 inches [50] mm thick polyurethane filler with 6 pounds [2722] grams density.
- D. 3/8 inch Class 1 fire rated plywood backer board.
- E. Cover: Solid vinyl coated polyester fabric with embossed pattern:
 1. Weight: 14 ounces per SY.
 2. Breaking strength: 350 PSI.
 3. Tear resistance: 65 pounds.
 4. Resistant to rot, mildew, and ultraviolet light.

5. Flammability: Rated self extinguishing in accordance with California State Fire Code F-230.
 6. Color: Red
- F. Ignition resistant liner: Liner with chemical additives that absorb and react to heat by liberating moisture and chemical flame retardants; Dupont Vonar as provided by Draper, Inc.
 - G. Construction: Cushioning material adhered to backer with liner positioned on top of foam and panel fully wrapped with fabric which is stapled to backer such that backer is not exposed on front or sides.
 - H. Provide 1 inch wide fabric flanges at panel bottom and top and Z clips at top for wall mounting panels.
 - I. Attachment: Provide pads without solid backing with Z mounting clips top and bottom.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Coordinate support of gymnasium divider curtains with roof structure to ensure proper distribution of loads and adequacy of attachment points. Ensure that building structure has been designed for loads of specific gymnasium divider to be provided.
- B. Coordinate configuration, size, and installation of scoreboard and gymnasium divider curtains with height, slope, and type of building structure and lighting fixtures, mechanical equipment, ductwork, fire-suppression system, bleachers, athletic equipment, and other potential obstructions.
- C. Field-verify dimensions prior to fabrication.
- D. For installations made after wood gymnasium flooring is installed, provide protection and exercise care not to damage flooring.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's written instructions and shop drawings.
- B. Install even, plumb and level.

3.03 TESTING AND DEMONSTRATION

- A. Operate scoreboard and curtain backstops to ensure proper installation. Adjust as required to ensure smooth operation and accurate positioning.
- B. Demonstrate to Owner's designated representatives complete operation and required maintenance.

END OF SECTION

DIVISION 13

SPECIAL CONSTRUCTION

SECTION 13 12 50

ANGLE FRAME BLEACHERS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Angle Frame Bleachers work required to complete the work of the contract including all the Angle Frame Bleachers work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all reinforcing, pinning, and finishes. Coordinate the Angle Frame Bleachers work with all the other trades for the project. Provide all demolition and disposal work to complete the Angle Frame Bleachers work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each sub-contractor, and each file sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Angle Frame Bleachers work includes, but is not limited to:
 - 1. Design and fabrication of four (4) row aluminum angle frame folding bleachers.

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer must have a minimum of ten (10) years experience in the design and manufacture of bleachers.
- B. Welders must conform to AWS standards.
- C. Codes and Standards: International Building Code 2009 Edition and ICC 300-2007.

1.04 WARRANTY

- A. Warranty shall guarantee bleachers to be free from defect in materials and workmanship for a period of 1 year under normal use. Warranty period shall begin on date of completion for projects installed by manufacturer, or its subcontractors.
- B. Anodized finish of plank extrusions shall be covered by a 5 year warranty against loss of structural strength or finish deterioration.

1.05 SUBMITTALS

- A. Submit in accordance with Section 01 30 00 - Submittals.
 - 1. List of proposed products and product data.
 - 2. Shop drawings showing layout, elevations, dimensions, fabrication details, method of attachment, loads to be transmitted to building structural members, requirements for supplementary bracing or structural support members.
 - 3. Manufacturer must provide calculations and reports for tests performed by an independent testing laboratory accredited by the American Association of Laboratory Accreditation (A2LA) that clearly demonstrate compliance with minimum safety factors included in product specifications.
 - 4. Samples of finishes for selection by Architect.
 - 5. Manufacturer's installation and maintenance instructions.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. National Recreation Systems, Inc., Aluminum Bleacher Co., Southern Bleacher Co., or approved equal.

2.02 DESIGN

- A. Applicable Codes: International Building Code (IBC), 2009 Edition and ICC 300-2007.
- B. Design Loads:
 - 1. Live Loads: Uniform loading - Structure = 100 psf
Uniform loading - Seat and Tread plank = 120 plf
 - 2. Sway Loads: Perpendicular to seats = 10 plf
Parallel to seats = 24 plf
 - 3. Guardrail Loads: Uniform load = 50 plf applied in any direction.
Concentrated load = 200 pounds applied in any direction.
 - 4. Wind Loads: per local building code requirements.

2.03 ANGLE FRAME BLEACHERS

- A. Quantity and Size: Shall consist of 2 units, 4 rows high x 6'3" long. Net seating capacity per unit 16, based on 18" per seat.
- B. Framework: Prefabricated aluminum angle or galvanized steel angle at max. 6' spacing joined by means of aluminum angle cross bracing.
- C. Shop connections: Welded to meet AWS standards.
- D. Joint Sleeve Assembly: Internal splices, where required shall be two per joint and shall penetrate the joint a minimum of 8 in. each direction and be riveted at one end only to allow for contraction and expansion.
- E. Rise and Run Dimensions:
 - 1. Standard rise/run = 8" rise/24" run. Seat height 17" above tread.
- F. Seats: Nominal 2" x 10" anodized aluminum with anodized end caps.
- G. Treads: (1) Nominal 2" x 10" mill finish aluminum with anodized end caps.

2.04 MATERIALS/FINISHES

- A. Framework:
 - 1. Aluminum: Structural fabrication with aluminum alloy 6061-T6 mill finish. Each frame shall be unit-welded, using metal inert gas method, under guidelines by the American Welding Society.

2. Galvanized Steel: ASTM A529 GR50. All steel is hot dipped galvanized after fabrication to ASTM A 123 specifications.
 3. All cross bracing and horizontal bracing shall be aluminum angle 6061-T6 mill finish.
- B. Extruded Aluminum:
1. Seat planks: Aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31 Class II with a wall thickness nominally .078" for impact and deformation resistance.
 2. Tread and Riser Planks: Aluminum alloy 6063-T6, mill finish with a wall thickness nominally .078" for impact and deformation resistance.
- C. Accessories:
1. Channel End Caps: Aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II.
 2. Hardware: Bolts and Nuts shall be hot dipped galvanized.
 3. Hold Down Clip Assembly: Aluminum alloy 6063-T6 mill finish.
 4. Joint Sleeve Assembly: Aluminum alloy 6061-T6, mill finish.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install bleacher unit in accordance with manufacturer written instructions and shop drawings.

END OF SECTION

DIVISION 26

ELECTRICAL

SECTION 26 00 00

ELECTRICAL

Filed Sub-Bid Required
Electrical

PART 1 - GENERAL

1.00 FILED SUB-BIDS

- A. ELECTRICAL is stipulated as a Filed Sub-Bid under Part B, Item 2, of the FORM FOR GENERAL BID.
- B. All sub-bids shall be submitted on the FORM FOR SUB-BID furnished by the Awarding Authority as required by Section 44G of Chapter 149 of the General Laws, as amended.
- C. Sub-bids must be filed with the Awarding Authority in a sealed envelope, before 10:30 AM, local time, on the date stipulated in the ADVERTISEMENT.
- D. Specific information relating to sub-bidders is set forth in the CONTRACTS DOCUMENTS under the heading, "NOTICE TO ALL BIDDERS", and the attention of the sub-bidders is directed thereto.
- E. The work to be done under this Section 26 00 00 is described herein and on Drawings D1-01-D3-01, A1-01-A5-01, E0.1-E2.1.

1.01 GENERAL REQUIREMENTS

- A. Include the General Conditions, Modifications to the General Conditions, and applicable parts of Division 01 as part of this Section.
- B. Examine all other Sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with that of all other trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that all the material, labor, and equipment be furnished complete in every respect, and that this Contractor shall provide all material, labor, and equipment needed and usually furnished in connection with such systems to provide a complete installation including all demolition, disposal, and patching of adjacent surfaces. Materials, equipment, and articles incorporated in the work shall be new and of the best grade of their respective kinds.

1.02 WORK TO BE PERFORMED

- A. Provide all the Electrical work required to complete the work of the contract including all the Electrical work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all reinforcing, pinning, and finishes. Coordinate the Electrical work with all the other trades for the project. Provide all demolition and disposal work to complete the Electrical work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, each sub-contractor, and each file sub-bidder for the entire project so that all the work can be properly and completely performed.
- B. Electrical work includes, but is not limited to:
1. Furnish all labor, materials, equipment and incidentals necessary to provide complete electrical system as shown on the Drawings and as specified herein. The major items of work shall generally consist of:
 2. Electrical Demolition: Demolition/removal of existing branch circuitry for the existing lighting, tele/data devices, plugmold and receptacle devices as indicated on the electrical drawings. Relocation of existing fire alarm initiation devices including ceiling mounted smoke and heat detectors.
 3. New Electrical Work in auditorium including providing new branch circuitry, lighting controls and circuit breakers to power new lighting as indicated on the electrical drawings. The work shall generally consist of providing:
 - a. Raceways, Fittings and Supports.
 - b. Wire and Cable.
 - c. Lighting.
 - d. Lighting Controls.
 - e. Grounding.
 - f. Electrical Identification (name plates and labeling).
 - g. All Fees and Permits.
 - h. Testing.
 - i. Operations and maintenance manuals.

j. Circuit breakers.

4. Furnish all labor and materials to perform demolition work as shown on the Drawings and as specified hereinafter.
5. During final inspection, the electrical contractor shall be available to the electrical engineers to open all electrical/control panels for inspectional purposes.

1.03 RELATED WORK PROVIDED BY THE GENERAL CONTRACTOR

A. Carpentry Work

1.04 CODES, ORDINANCES, AND PERMITS

- A. Installation of systems and equipment provided under this section shall be done in strict accordance with Massachusetts Department of Public Safety Codes, Massachusetts Department of Environmental Protection, Massachusetts State Building Code, the Massachusetts Electrical Code, the National Electrical Code (most recent editions) and the Town of Waltham Codes and Regulations having jurisdiction.
- B. All electrical apparatus furnished under this section shall be approved by the UL and shall be so labeled or listed where such is applicable. Where custom-built equipment is specified and the UL label or listing is not applicable to the completed product, all components used in the construction of such equipment shall be labeled or listed by UL where such is applicable to the component.
- C. Give notices, file plans, pay for and obtain permits and licenses, pay fees and obtain necessary approvals from authorities having jurisdiction. Deliver certificates of inspection and approval to the Engineer. Authorities having jurisdiction include, but are not necessarily limited to:
 1. Town of Waltham Wiring Inspector (Inspectional Services Department)
- D. No work shall be covered before examination and approval by Engineer, inspectors, and authorities having jurisdiction. Replace imperfect or condemned work conforming to requirements, satisfactory to Engineer, and without extra cost to the Owner. If work is covered before due inspection and approval, the installing contractors shall pay costs of uncovering and reinstalling the covering, whether it meets contract requirements or not.
- E. In the event local inspectors or codes require a change in the material, design, or involve additional labor, all such changes shall be submitted to the Engineer for approval before proceeding with the work. Comply with all local codes and inspections.

1.05 RECORD DRAWINGS

- A. Refer to Section 01 70 00, Project Closeout, of the Specifications for record drawings and procedures to be provided under this section.

1.06 CLEANING

- A. During the progress of the electrical work, the Electrical Contractor shall clean up and remove all scrap, demolition material, and other debris caused by the Contractor. At completion, the Electrical Contractor shall clean all electrical equipment, wiring and raceway systems and leave all work in perfect operating condition.

1.07 COORDINATION AND RESPONSIBILITY

- A. The structure and its appurtenances, clearances and the related services, such as plumbing, heating, ventilation and electric service have been planned to be legal, adequate and suitable for the installation of equipment specified under this section. The Owner will not assume any increase in cost caused by differing requirements peculiar to a particular make or type of equipment, and any incidental cost shall be borne by the Electrical Contractor. He shall be responsible for the proper location of his required sleeves, chases, inserts, etc., and see that they are set in the forms before the concrete is poured. He shall be responsible for his work and equipment furnished and installed by him until the completion and final acceptance of this contract, and he shall replace any work which may be damaged, lost or stolen, without additional cost to the Owner.

1.08 PROTECTION OF MATERIALS, WORK, AND GROUNDS

- A. Materials, fixtures and equipment shall be properly protected and all raceway openings shall be temporarily closed so as to prevent obstruction and damage.
- B. Protect and preserve all materials, supplies and equipment of every description and all work performed. Protect all existing equipment and property of any kind from damage during the operations. Damage shall be repaired or replaced promptly by the Electrical Contractor at his expense.

1.09 DRAWINGS

- A. It is the intention of the Specifications and Drawings to call for finished work, tested and ready for operation. Any apparatus, appliance, material or work not shown on the Drawings, but mentioned in the Specifications or vice-versa, or any incidental accessories necessary to make the work complete in all respects and ready for operation, even if not particularly specified, shall be provided by the Electrical Contractor without additional expense to the Owner.

- B. The Drawings are generally diagrammatic. The locations of all items that are not definitely fixed by dimensions are approximate only. The exact locations must be determined at the project and shall have the approval of the Engineer before being installed. The Electrical Contractor shall follow Drawings, including his shop drawings, in laying out work and shall check the Drawings of other trades to verify spaces in which work will be installed. Maintain maximum headroom and space conditions. Where space conditions appear inadequate, notify the Engineer before proceeding with the installation. The Electrical Contractor shall, without extra charge, make reasonable modifications in the layout as needed to prevent conflict with work of other trades or for proper execution of the work.
- C. Size of raceways and methods of running them are shown, but it is not intended to show every offset and fitting, nor every structural difficulty that may be encountered. To carry out the true intent and purpose of the Drawings, all necessary parts to make complete approved working systems ready for use, shall be furnished without extra charge. All work shall be installed in such a manner as to avoid being unsightly.
- D. All measurements shall be taken at the building by the Electrical Contractor, prior to purchasing and installing the equipment and raceways.

1.10 APPROVAL OF MANUFACTURERS AND SHOP DRAWINGS

- A. Submit five (5) copies of the following in accordance with Section 01300.
 - 1. Lighting.
 - 2. Lighting Controls.
 - 3. Wire and Cable.
 - 4. Conduit and Raceways.
 - 5. Circuit Breakers.
- B. Individual information shall be submitted for each type of equipment. Where multiple products of various sizes, capacities or ratings are indicated on the same page of a submittal, the Electrical Contractor shall clearly identify which items are being submitted. Unmarked submittals will be returned without action. Additional requirements for shop drawings may be contained under individual items.

1.11 UNDERWRITERS' LABEL AND LISTING

- A. All electrical apparatus furnished under this Section shall be approved by the UL and shall be labeled or listed where such is applicable. Where custom-built

equipment is specified and the UL label or listing is not applicable to the completed product, all components used in the construction of such equipment shall be labeled or listed by UL where such is applicable to the component.

1.12 CUTTING AND PATCHING

- A. All cutting and patching necessary for the proper installation of work to be performed under this Section shall be performed by the General Contractor.
- B. All work shall be fully coordinated with all phases of construction, in order to minimize the requirements for cutting and patching.
- C. All of this work shall be done by careful workmen competent to do such work and with the proper and smallest tools applicable.
- D. Any cost caused by defective or ill-timed work shall be borne by the contractor responsible.

1.13 GUARANTEE

- A. The Electrical Contractor shall guarantee, in writing, all work and all materials provided under this Section in accordance with the provisions of the printed form of Contract and the General Conditions.

1.14 ELECTRICAL

- A. All furnished electrical apparatus and controls shall conform to applicable requirements under DIVISION 26 - ELECTRICAL.

1.15 VERIFYING EXISTING CONDITIONS

- A. Before commencing any work under this section, verify all governing dimensions and examine all adjoining work on which this work is in any way associated or connected. Failure to visit the jobsite will in no way relieve the Electrical Contractor from installing the work according to the intent of these specifications and at no additional cost to the Owner.
- B. Each bidder shall visit the site and inspect conditions affecting the proposed work. Failure to do so and misinterpretation of the Plans and Specifications shall be entirely the responsibility of the bidder, and will not be a basis for claim for extra compensation.
- C. Each bidder shall make note of the existing conditions affecting hauling, rigging transportation, installation, etc., in connection for his work and shall make all provisions for transportation such of all materials and equipment.

- D. Where field conditions require, the Electrical Contractor shall arrange for equipment to be shipped to the job, dismantled and assembled in place.

1.16 PAINTING

- A. All finish field painting shall be provided by the General Contractor.

1.17 REFERENCE STANDARDS

- A. The latest published issue of the standards, recommendations, or requirements of the following listed societies, associations, or institutes in effect at the date of Contract are part of this Specification. These shall be considered as minimum requirements; specific requirements of this specification and/or associated drawings shall have precedence. In case of conflict between published requirements, the Engineer and/or Owner's representative shall determine which is to be followed.
- B. Electrical equipment, installation and workmanship shall conform to the latest editions of the applicable codes and standards of the following organizations.
 - 1. Institute of Electrical and Electronic Engineers (IEEE)
 - 2. American National Standards Institute (ANSI)
 - 3. Massachusetts and National Electrical Code (MEC/NEC)
 - 4. Underwriters' Laboratories (UL)
 - 5. National Bureau of Standards (NBS)
 - a. H33-Safety Rules-Electrical Utilization Equipment.
 - b. H51-Safety Rules-Installation and Maintenance of Electric Supply and Communication Lines.
 - 6. National Electrical Manufacturers Association (NEMA)
 - 7. American Society for Testing and Materials (ASTM)
 - 8. Insulated Power Cable Engineers Association (IPCEA)
 - 9. Occupational Safety and Health Act (OSHA)

1.18 COOPERATION WITH OTHER TRADES

- A. The work shall be so performed that the progress of the entire building construction, including all other trades, shall not be delayed or interfered with.

Materials and apparatus shall be installed as fast as conditions of the building will permit and must be installed promptly when and as desired.

- B. Confer with all other trades relative to location of all apparatus and equipment to be installed and select locations so as not to conflict with work of other Sections. Any conflicts shall be referred immediately to the Engineer for decision to prevent delay in installation of work. All work and materials placed in violation of this clause shall be readjusted to the Engineer's satisfaction, at no expense to the Owner.
- C. Where work of this section will be installed in close proximity to work of other sections or where there is evidence that the work of this section will interfere with work of other sections, assist in working out space conditions to make satisfactory adjustment. If so directed by the Engineer, prepare and submit for approval 1/8" scale or larger working drawings and sections, clearly showing how this work is to be installed in relation to the work of other sections. If the work of this section is installed before coordinating with other trades or so as to cause interference with work of other trades, make changes necessary to protect conditions without extra charge.

1.19 WORKING CONDITIONS AND SAFETY

- A. Whereas the building may be occupied during the construction period, it is of utmost importance for occupant's safety and that the building functions be maintained. The Electrical Contractor shall not disrupt the normal operations of the building and shall be required to cease work during occupied hours if, in the opinion of the Owner's Representative or the Engineer, the work creates a disruption. The Electrical Contractor will then be required to perform such disruptive work during unoccupied business hours. No work shall commence until the site has been properly prepared.

1.20 MATERIAL AND WORKMANSHIP

- A. All material provided shall be new and approved for the intended service.
- B. Defective equipment or equipment damaged in the course of installation or testing shall be replaced by the Electrical Contractor at no cost to the Owner.
- C. All work shall be executed in the best and most thorough manner known to each trade. Employ careful, competent, experienced journeymen, and insofar as possible, keep the same foreman and workmen from the beginning to the completion of the job.

1.21 PRODUCT HANDLING AND STORAGE

- A. Arrange for, and provide, a storage space or area at the job site for all electrical equipment and materials to be installed or reinstalled in the project. The exact location of portable storage vans at the job site or protected storage areas within the building construction, conditions permitting, shall be arranged with the Engineer.
- B. All electrical equipment and materials, upon receipt at the job site shall be thoroughly inspected as to their type and condition and the quantity received.
- C. After inspection, all electrical equipment and materials shall be moved to the storage area designated.

1.22 OUTAGES

- A. The Electrical Contractor shall coordinate all power outages with Owner's Representative.
- B. Outages confined to the new boiler room shall be coordinated with the general contractor.

1.23 HOISTING, SCAFFOLDING, STAGING AND PLANKING

- A. Provide, set up and maintain all required derricks, hoisting, machinery, scaffolding, staging and planting for the work of this section.
- B. Scaffolding is to have solid backs and floors to prevent dropping materials to the floors or ground.

PART 2 - MATERIALS

2.01 RACEWAYS AND FITTINGS

- A. General:
 - 1. All wiring shall be installed in conduit or wireways, unless otherwise indicated. All conduits shall be minimum 3/4" commercial trade size, unless otherwise specified or indicated on the drawings. Metallic conduit fittings shall be made of steel or malleable iron only. Die-cast zinc-alloy fittings and fitting made of inferior materials, such as "pot metal", shall not be used.
- B. Rigid Steel Conduit:
 - 1. Rigid Steel, Galvanized

- a. Full weight galvanized steel conforming with UL 6 and ANSI C80.1.
2. Terminations
 - a. Double locknuttred with insulated throat bushings in dry locations.
 - b. Insulated, gasketed hub connectors in damp/wet locations.
3. Fittings and Conduit Bodies
 - a. Fittings and conduit bodies: ANSI/NEMA FB 1; threaded type, material to match conduit.
- C. Metal Clad Cable (MC)
 1. Where indicated on the drawings, type MC Cable shall be provided.
- D. Liquid-Tight Flexible Metal Conduit
 1. Flexible galvanized steel tubing over which is extruded a liquid-tight jacket of polyvinyl chloride (PVC) 1-1/4" size and smaller shall be provided with a continuous copper bonding conductor.
 2. Connectors shall be steel or malleable iron with insulated throats.
- E. Wireways
 1. Wireways, auxiliary gutters, and associated fittings shall comply with UL 870.
 2. Wireways shall be of the screw-cover type, and of sizes indicated or as required by NEC.
 3. Wireways shall be of raintight construction in wet locations.
 4. Finish shall be paint, manufacturer's standard.

2.02 OUTLET BOXES

- A. Outlet boxes for exposed conduit work shall be cast aluminum alloy with cast aluminum alloy covers.
- B. Switch boxes, receptacle boxes and other outlet boxes shall be standard 4" square with plaster rings or gang covers as required.

- C. Outlet boxes for various systems and components shall be as required by manufacturer.
- D. Provide screw-joint outlet boxes, with gasketed weatherproof covers in locations, where exposed to moisture, or next to water or steam connections, and where indicated as weatherproof on Drawings.
- E. Provide only enough conduit openings to accommodate conduits at individual location. Each box shall be large enough to accommodate number and sizes of conduits, wires and splices to meet NEC requirements, but shall be at least size shown or specified. Necessary volume shall be obtained by using boxes of proper dimensions.

2.03 WALL SWITCHES

- A. Wall switches shall be of the totally enclosed tumbler type. The wall switch handle and switch plate color shall harmonize with the color of the respective wall. Wiring terminals shall be of the screw type or of the solderless pressure type having suitable conductor-release arrangement. Switches shall be rated [15-ampere] [20-ampere] [120] [277]-volt for use on alternating current only. Pilot lights indicated shall consist of yoke-mounted candelabra-base sockets rated at 75 watts, 125 volts, and fitted with glass or plastic jewels. A clear 6-watt lamp shall be furnished and installed in each pilot switch. Jewels for use with switches controlling motors shall be green, and jewels for other purposes shall be red. Dimming switches shall be solid-state, sized for the loads.
 - 1. Provide wiring devices by single manufacturer. Arrow-Hart (Division of Crouse-Hinds), Leviton, Bryant, Hubbell or approved equal. Catalog designations of Arrow-Hart are specified to establish standards of quality for materials and performance. Devices shall be white.
- B. Toggle Switches:
 - 1. Single-pole shall be No. 1991, 20A, 120-277 V AC.
 - 2. Double-pole shall be No. 1992, 20A., 120-277 V AC.
 - 3. Three-way shall be No. 1993, 20A., 120-277 V AC.
 - 4. Four-way shall be No. 1994, 20A., 120-277 V AC.
- C. Miscellaneous Switches:
 - 1. In vaportight applications, switches shall be enclosed in Crouse-Hinds FS or FD Condulet with vaportight cover.
 - 2. Key switches shall be No. 1991-L, or 1994-L, 20A, 120-277 V.

D. Combination Devices:

1. Combination switch and red neon pilot light shall be No. 1991 switch with No. 1720, 277 V pilot, in two gang combination box.
2. Refer to symbol list on Electrical Drawing for additional device information. Caps and cords shall be connected to equipment.

E. Dimmers (Incandescent):

1. Provide dimmers rated for incandescent load of 1000 W or 2000 W.
2. Rotary push-on, push-off dimmers shall be Lutron Centurion or approved equal. Linear slide control dimmers shall be Lutron Nova or approved equal.

2.04 WIRING DEVICE PLATES

- A. Provide 0.040" brushed stainless steel device plates by Arrow-Hart, Bryant, Hubbell or approved equal. One-piece type device plates shall be provided for all outlets and fittings. Plates on unfinished walls and on fittings shall be of zinc-coated sheet steel, cast-metal, or impact resistant plastic having rounded or beveled edges. Plates on finished walls shall be of steel with baked enamel finish. Screws shall be of metal with countersunk heads, in a color to match the finish of the plate.
- B. Nameplate designations for device plates shall be engraved directly on plates and filled in.
- C. Device plates for switches and receptacles connected to emergency circuits shall have engraved nameplates marked "Emergency Circuit" in 1/4" letters, filled red.
- D. Device plates shall be manufacturer of wiring devices.
- E. Receptacle device plates for circuits other than 120 V, 2-wire, shall be engraved with 1/4" letters, filled red, indicating voltage characteristics and circuit number of outlet.
- F. Outlets shall be flush to surface.

2.05 LIGHTING FIXTURES

- A. Provide lighting fixtures, equipment and components where shown on Drawings, as listed in fixture schedules and as specified, wired and assembled. Provide approved aligner canopies, hangers and other appurtenances as required.

1. Fluorescent fixtures shall have low loss, high efficiency, high efficiency, high power factor energy saving, 277 V or (120 V) ballasts, with sound rating A and shall be CBM-certified. Fluorescent lighting fixtures shall have Type P SLH or approved equal by G.E. Provide fuse holder and fuse for each ballast.
 2. Outdoor medium flood light #500 PAR64-MFL in white by SLD Lighting or approved equal, with #9112 safety cable, clamp heavy duty, and lamp PAR64, 1000 watt, MED spot, 800 HR, color temp 3200.
- B. Verify ceiling constructions, and provide fixtures, ballasts, frames, rings and other accessories suitable for construction encountered.
- C. Coordinate installation of fixtures with installation of ceiling materials and suspension system.
1. Ceiling-mounted fixtures shall be supported independent of hung ceiling with (threaded rod) (or) (bow chain).
 2. In no case shall lighting fixtures be suspended from hung ceiling, conduit or duct. Fixtures shall be supported from structural members only.
 3. Provide two (2) Unistrut below plaster ceiling. Provide 2x8 wood blocking above plaster ceiling to support Unistrut. Provide threaded rods to support Unistrut and patch plaster.
 4. Investigate lighting fixture locations and supports to ensure that no interference exists between lighting fixture, supports and other equipment. Correct interferences as directed by Owner's Representative.
- D. Refer to fixture schedule for specific lamp requirements.
- E. Incandescent and tungsten halogen lamps shall not be operated, other than for initial testing, before final inspection.
- F. Provide polyester covers to protect fluorescent fixtures with parabolic louvers during construction.

2.06 DEVICE, PULL AND JUNCTION BOXES

- A. The Electrical Contractor shall provide junction boxes, pull boxes, terminal boxes and fittings as indicated on drawings, specified herein or wherever necessary to facilitate pulling or splicing of wires and cables of all electrical systems, and/or required by code.
- B. Junction or pull boxes not over 100 cubic inches in size shall be standard outlet boxes, except as noted otherwise. Junction and pull boxes over 100 cubic inches

in size shall be constructed of code gauge sheet steel with screw covers and gaskets and shall be fabricated from approved detailed working drawings. Finish shall be paint over zinc chromate primer.

- C. Outlet boxes in unfinished areas shall be cast metal with threaded conduit hubs.
- D. Outlet boxes for receptacles shall be of galvanized steel at least 2" deep and of sufficient size to accommodate devices at outlet location. All boxes shall have mounting lugs or ears for covers and knockouts for raceway termination.

2.07 WIRE AND CABLE

- A. Wire and cable of sizes, quantities and types shown on drawings, schedules or specified herein shall be provided by the Electrical Contractor. All wire and cable shall be installed in raceways, unless otherwise indicated.
- B. Wire and cable work shall be in strict accordance with requirements of National Electrical Code and its latest revisions, both with respect to material and workmanship, except where insulation thickness and covering are required by these Specifications in excess of Code requirements.
- C. Minimum size wiring, unless otherwise indicated, for power branch circuit shall be #12 AWG.
- D. Branch circuit power, and control wiring, except as otherwise noted, shall have type THWN-THHN, 600 volts insulation. Unless otherwise noted, feeder wiring and branch circuit wiring sizes #6 AWG AND LARGER shall be Type XHHW, #8 AWG and smaller type shall be THWN-THHN.
- E. Wires and cables shall be single conductor. Conductors of sizes #8 AWG and larger shall be stranded; wires smaller than #8 AWG shall be solid. Conductors shall be soft drawn copper and have a conductivity of not less than 98 percent of ASTM standards for annealed copper. Aluminum conductors will not be accepted.
- F. Sizes 12 and 10 AWG wire and cable shall be factory color-coded with a separate color for each phase of each system voltage used consistently throughout power systems. Size 8 AWG and larger shall be completely colored with vinyl tape wherever accessible. Colors shall be in accordance with those listed in Section 3 of this specification.
- G. Grounding conductors and equipment grounds unless bare, shall have a GREEN covering or shall be completely marked with green tape at boxes, conduit bodies or where otherwise accessible.

- H. Cables ties and straps shall be self-clinching types of one piece molded construction. Bodies shall be of nylon and clinching clips shall be spring bronze. Ties and straps shall be Thomas & Betts Company, Types TY-25 and TY-35 or approved equal.
- I. Splices and taps in wires #8 and larger shall be made with solderless mechanical compression connectors designated for the purpose. Splices and taps shall be taped with approved tapes providing insulation not less than that of the conductors. Joints for wires #10 AWG and smaller shall be made with spring type screw-on connectors.
- J. Splicing tape shall be vinyl plastic tape 8.5 mils minimum thickness, flame retardant, abrasion, ultra-violet, moisture, alkali, acid, and corrosion resistant.

2.08 WIRE PULLING EQUIPMENT

- A. Provide polyethylene ropes for pulling wire.

2.09 GROUNDING

- A. Cables shall be of solid or stranded copper size as specified on the drawings. Cables shall be bare when installed in soil or in open air, and shall be insulated with 600 volt green jackets in all runs installed in conduit.
- B. The grounding conductor bonding jumper shall be attached to the circuits, conduits, cabinets, equipment and the like, which are to be grounded by means of suitable lugs, pressure connectors and clamps.
- C. All feeder and three phase motor circuits shall be provided with an appropriately sized grounding conductor. Sizes shall be based on NEC Table 250-95. Grounding conductors shall also be provided wherever the raceway is not a suitable grounding conductor.

2.10 CIRCUIT BREAKERS

- A. Shall be bolt on type.
- B. Thermomagnetic trip.
- C. UL Listed compatible with existing.
- D. Match existing.

2.11 IDENTIFICATION

A. Wire and Cable Identification

1. Conductor labels shall be white, adhesive self-laminating type. All text shall be typed. String tags shall not be accepted. Temporary tagging during construction shall be allowed, but all permanent adhesive tags shall be in place prior to requesting final acceptance.

PART 3 - EXECUTION

3.01 RACEWAYS AND FITTINGS

A. Conduits usage shall be as follows:

Location	Exposed/Concealed	Damage	Wet/Damp/Dry	Conduits
Interior	Exposed	No	Dry	RGS
Interior	Exposed	No	Wet	RGS
Interior	Exposed	Yes	Dry	RGS
Interior	Exposed	Yes	Wet	RGS
*RGS - Rigid Galvanized Steel				

B. The following areas shall be considered damp/wet locations, and raceways installed according to NEC requirements for such locations:

1. Boiler Room Exterior Locations.

C. All conduits shall be cut square and reamed at the ends. All joints shall be drawn tight. Exposed conduit shall be run parallel to or at right angles to the lines of the building. Right angle bends in exposed conduit shall be made with standard elbows, conduit body fittings, or conduit bent to radii not less than those of standard elbows. All bends shall be free from dents or flattening.

D. Conduit shall be made mechanically and electrically continuous from service entrance to all outlets

E. Conduit connected to wall outlets shall be run in such a manner that they will not cross water, steam or waste pipes wherever possible. Overhead conduits shall be run above water, steam or waste lines wherever possible.

F. Liquid-tight flexible conduits shall be used for connection to motors and other electrical equipment when it is subject to movement, vibration, misalignment or cramped quarters or where noise transmission is to be eliminated or reduced. Proper angle connectors (straight, 45 degree, 90 degree) shall be used for the installation. Improperly installed connectors are not allowed.

- G. Pipe straps and hanger rods shall be fastened to concrete by means of inserts or expansion bolts, to brickwork by means of expansion bolts and to hollow masonry by means of toggle bolts. Hanger rods shall be fastened to beams and joists by means of swivel type beam clamps. Wooden plugs and shields and powder driven fasteners shall not be used.
- H. Individual horizontal conduits shall be supported by one hole pipe straps or separate pipe hangers for sizes 1-1/2" and smaller. Spring steel fasteners may be used for sizes 1-1/2" and smaller in dry locations only. Hanger rods used with spring steel fasteners shall be minimum 1/4" diameter.
- I. Where two or more horizontal conduits run parallel and at the same elevation, they shall be supported on multiple pipe hangers. Conduit shall be secured to the horizontal hanger member.
- J. Pullboxes shall not be utilized for the vertical support of conduits.
- K. Every conduit system shall be installed complete and blown through and swabbed before conductors are installed.
- L. Wireways shall be used for mounting groups of disconnects and/or starters, or where shown on the drawings.

3.02 DEVICE, PULL AND JUNCTION BOXES

- A. Boxes shall be installed in rigid and satisfactory manner supported by bar hangers in frame constructions or fastened directly with wood screws on wood; bolts to hollow expansion shields on concrete or brick, toggle bolts on hollow masonry units and machine screws or welded threaded studs on metal. Threaded studs provided with lock washers and nuts are acceptable for mounting of outlets on concrete construction.
- B. Location of devices shown on the Drawings is approximate. When necessary, devices shall be relocated at no extra cost within a 10'-0" radius to avoid conflicts with structural conditions or equipment of other trades. Outlets shall be symmetrically located according to room layouts.
- C. Boxes shall be secure to conduit by means of double steel locknuts (inside and outside) and malleable iron or steel insulated throat bushings. Covers on fire alarm system junction and pull boxes shall be painted RED with nameplates.

3.03 LAMPS AND LIGHTING FIXTURES

- A. Ballasted fixtures shall have ballasts which are compatible with the specific type and rating of lamps indicated and shall comply with the applicable provisions of the publications referenced.

1. Lamps: Lamps of the type, wattage, and voltage rating indicated shall be delivered to the project in the original cartons and installed in the fixtures just prior to the completion of the project.
2. Fixtures: Fixtures shall be as shown and shall conform to the specifications and shall be as detailed in fixture schedule. In suspended acoustical ceilings with fluorescent fixtures, the fluorescent emergency light fixtures shall be furnished with self-contained battery packs.
 - a. Accessories: Accessories such as straps, mounting plates, nipples, or brackets shall be provided for proper installation. Open type fluorescent fixtures with exposed lamps shall have a wire-basket type guard.
 - b. Suspended Fixtures: Suspended fixtures shall be provided with swivel hangers in order to ensure a plumb installation. Pendants, rods, or chains 4 feet or longer excluding fixture, shall be braced to limit swinging. Bracing shall be 3 directional, 120 degrees apart. Single unit suspended fluorescent fixtures shall have twin-stem hangers. Multiple unit or continuous-row fluorescent units shall have a tubing or stem for wiring at one point, and a tubing or rod suspension provided for each length of chassis including one at each end. Maximum distance between adjacent tubing or stems shall be 10 feet. Rods shall be of not less than 3/16 inch diameter. Flexible raceway shall be installed to each fixture from an overhead junction box. Fixture to fixture wiring installation is allowed only when fixtures are installed end to end in a continuous run.
 - c. Ceiling Fixtures: Ceiling fixtures shall be coordinated with and suitable for installation in, on, or from the suspended ceiling provided under other sections of these specifications. Installation and support of fixtures shall be in accordance with the NFPA 70 and manufacturer's recommendations. Where seismic requirements are specified herein, fixtures shall be supported as shown or specified. Recessed fixtures shall have adjustable fittings to permit alignment with ceiling panels. Recessed fixtures installed in fire-resistive type of suspended ceiling construction shall have the same fire rating as the ceiling or shall be provided with fireproofing boxes having materials of the same fire rating as the ceiling panels, in conformance with UL-03.
 - d. Sockets: Sockets of industrial, strip and other open type fluorescent fixtures shall be of the type requiring a forced movement along the longitudinal axis of the lamp for insertion and removal of the lamp.

- e. Do not install fixtures until work of other trades that may damage fixtures is completed.
 - f. Provide plaster frames for fixtures recessed in gypsum board or plaster ceiling.
 - g. Do not suspend or support lighting fixtures or safety chains from hung ceiling conduit or duct. Support fixtures with threaded rod from structural members only.
 - h. Provide unistrut below ducts where fixture locations coincide with duct runs. Provide threaded rods to support unistrut.
 - i. Luminaires shall be compatible with flexible wiring system.
 - j. Where air is supplied or returned through luminaires, coordinate compatibility of fixtures with air boots and attachments.
 - k. Patch spray-on fireproofing damaged during installation.
 - l. Support surface-mounted luminaires at least two concealed points to prevent rotation.
 - m. Fire-rated enclosures necessary for fixture housings above ceiling will be provided under another Section.
 - n. Mounting height of suspended or wall-mounted luminaires shall be shown on Drawings.
 - o. Locate ceiling-mounted fixtures as shown on reflected ceiling plans. Locate wall- and floor-mounted fixtures as shown on Electrical Drawings.
 - p. Coordinate aiming of adjustable fixtures with Owner's Representative.
3. Emergency Light Sets: Emergency light sets shall conform to UL 924 and shall be permanently connected to the wiring system by conductors installed in short lengths of flexible conduit.

3.04 WIRE AND CABLE

A. 250 Volt Systems:

- 1. Conductors shall not be installed in a manner which will injure their insulation or covering. Conduit system shall be complete before any conductors are installed. Conductors shall not be installed until such time

that the conductors can be suitably protected against the elements and damage.

2. Provide and use suitable cable pulling winches or equipment of adequate capacity in order to insure a steady, continuous pull. Before any wires or cables are drawn into conduits, the conduit shall be cleaned out by pulling a swab through the conduit with fish tape, and wires shall be pulled through conduit in such a manner as to avoid kinking or injuring the insulation. Only non-metallic approved cable lubricants shall be used when necessary. Cable lubricants shall be completely removed at panelboards, pull and junction boxes and other accessible locations.
3. All feeder cables shall be continuous from origin to panel or equipment termination without running splices in intermediate pull or splice boxes. Where taps and splices are deemed necessary by job conditions, they shall first be approved by the Engineer and shall be made in approved splice boxes with suitable connectors as noted herein. Special note is to be made when extending existing feeders.
4. No splices or joints shall be permitted in branch circuits except within accessible junction boxes. Splices in junction boxes shall be with enough spare wire to enable two or more splices to be remade with the same wire in event of a fault. When a bolted splice or connection presents an irregular surface, duct seal compound shall be molded around the joint. It shall make a smooth taping surface and prevent the formation of air pockets.
5. Use solderless pressure connectors on conductors of No. 8 AWG and larger and tape to provide insulation not less than that of the conductor. Solderless connectors shall be of rugged construction with multi-point contact on cable, ground contact surfaces for low resistance and low temperature rise, and with high pull-out strength. On conductors of 250 MCM or larger provide not less than 2 pressure connectors.
6. On conductor sizes No. 10 or smaller, connectors shall be molded composition with metal thread-on core.
7. At panelboards, junction boxes and conductors shall be identified with circuit numbers by applying suitable marking.
8. Neatly train all wiring within equipment boxes and panelboards.
9. Inspect all wire and cable for damage after installation. Replace all damaged conductors or insulation. Megger test all feeder conductors and record results in accordance with Section 01700 of this specification. Verify all phasing of conductors and equipment.

10. Conductor color coding for power circuits shall be as follows:

<u>Phase</u>	<u>120/208 volts</u>
A	Black
B	Red
C	Blue
Neutral	White
Ground	Green

3.05 GENERAL TESTING, INSPECTION AND CLEANING

- A. Test and inspect work provided under this Section as required by Contract Documents, codes, standards and authorities that have jurisdiction, to satisfaction of Owner's Representative. Notify Owner's Representative and authorities at least 48 hours before testing or inspection. Do not cover work before testing or inspection.
- B. Furnish Owner's Representative with certificates of testing and inspection for electrical systems, indicating approval of authorities that have jurisdiction and conformance with requirements of Contract Documents.
- C. Test wiring and connections for continuity and grounds before fixtures are connected; demonstrate insulation resistance by megger test as required. Insulation resistance between conductors and grounds for secondary distributions systems shall meet NEC requirements.
- D. Verify and correct as necessary: voltages, tap settings, trip settings and phasing on equipment from secondary distribution system to points of use. Test secondary voltages at bus in main switchboard, at panelboards, and at other locations on distribution systems as necessary. Test secondary voltages under no-load and full-load conditions.
- E. Test lighting fixtures with specified lamps in place for 10 hours; check fixtures in sections. Do not operate lamps other than for testing before final inspection by Owner's Representative. Replace lamps that fail within 90 days after acceptance by Owner's Representative within Contract Price.
- F. Provide necessary testing equipment and testing.
- G. Failure or defects in workmanship or materials revealed by tests or inspection shall be corrected promptly and retested. Replace defective material.
- H. Clean panels and other equipment. Panelboard interiors shall be cleaned and vacuumed. Equipment with damage to painted finish shall be repaired to Owner's Representative's satisfaction.

GYMNASIUM AND AUDITORIUM RESTORATION AT
SOUTH MIDDLE SCHOOL
WALTHAM, MASSACHUSETTS
CBI JOB NO.: 11066

CBI Consulting Inc.
Boston, Massachusetts
Tel: (617) 268-8977
Fax: (617) 464-2971

I. Equipment

1. After completion of project, clean the exterior surface of equipment included in this section, including concrete residue.

END OF SECTION

WALTHAM COMMUNITY CENTER

AUDITORIUM AND GYMNASIUM RENOVATIONS



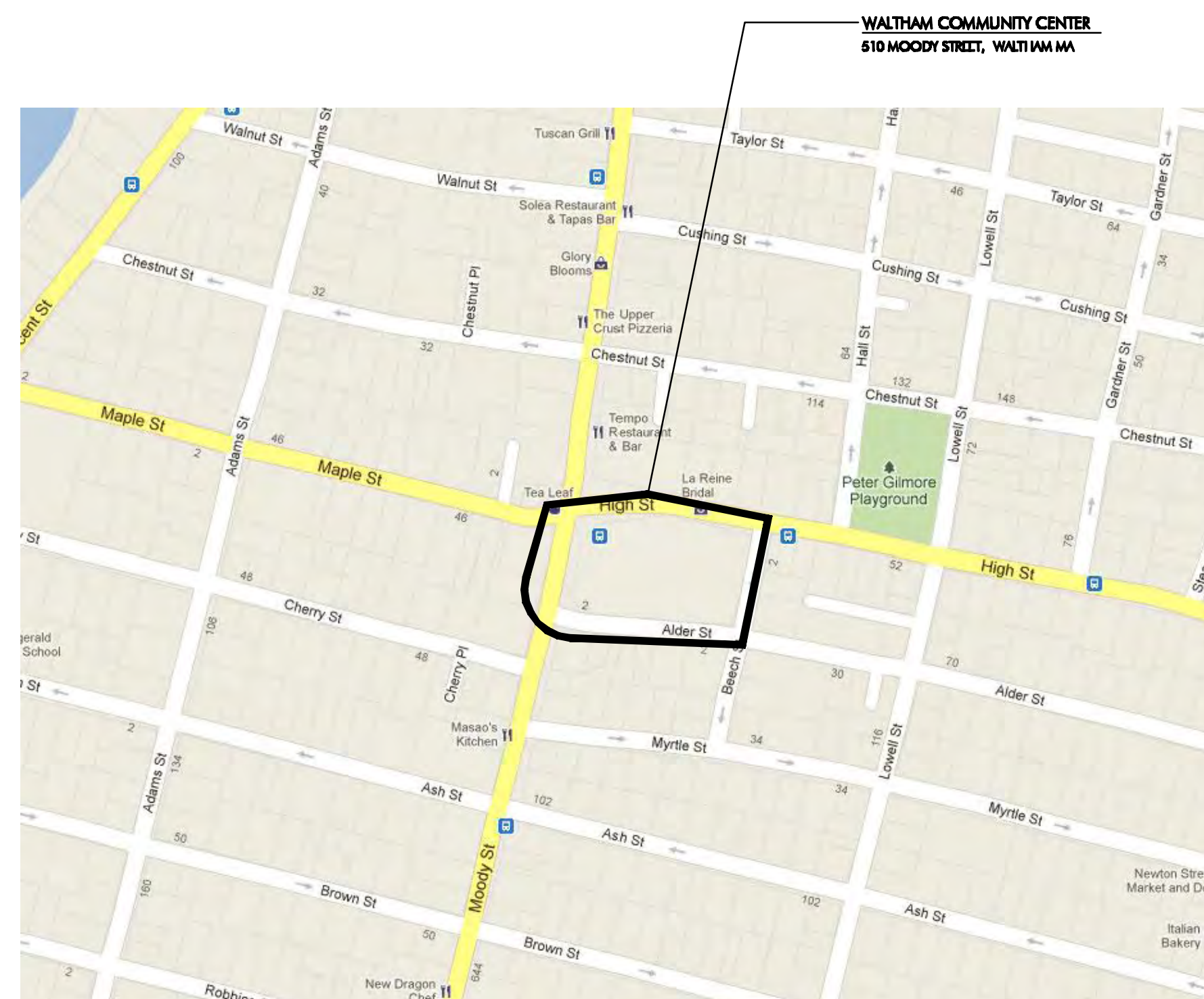
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AUDITORIUM AND
GYMNASIUM
RENOVATIONS

WALTHAM
COMMUNITY
CENTER
510 MOODY STREET
WALTHAM, MA 02453

LOCATOR MAP

NOTE:
CONTRACTOR TO FIELD VERIFY ALL
DIMENSIONS AND CONDITIONS.



DRAWING SHEETS:

G0-01 COVER SHEET

DEMOLITION

- D1-01 GROUND FLOOR DEMOLITION PLAN
- D1-02 FIRST FLOOR DEMOLITION PLAN
- D1-03 GYMNASIUM DEMOLITION FLOOR PLAN
- D1-04 AUDITORIUM DEMOLITION FLOOR PLAN
- D1-05 AUDITORIUM BALCONY DEMOLITION FLOOR PLAN
- D1-06 AUDITORIUM REFLECTED CEILING DEMOLITION PLAN
- D1-07 GYMNASIUM DEMOLITION REFLECTED CEILING PLAN
- D2-01 INTERIOR DEMOLITION ELEVATIONS
- D3-01 DEMOLITION DETAILS

ARCHITECTURAL

- A1-01 GYMNASIUM FLOOR PLAN
- A1-02 AUDITORIUM FLOOR PLAN
- A1-03 AUDITORIUM BALCONY FLOOR PLAN
- A1-04 AUDITORIUM REFLECTED CEILING PLAN
- A1-05 GYMNASIUM REFLECTED CEILING PLAN
- A2-01 INTERIOR ELEVATIONS
- A3-01 TYPICAL DETAILS
- A3-02 TYPICAL DETAILS
- A4-01 PHOTOS
- A4-02 PHOTOS
- A4-03 PHOTOS

MECHANICAL

- H1.1 AUDITORIUM MECHANICAL DEMOLITION PLAN

ELECTRICAL

- E0.1 ELECTRICAL LEGEND, NOTES, & ABBREVIATIONS
- E1.0 AUDITORIUM ELECTRICAL DEMOLITION PLAN
- E1.1 GYMNASIUM ELEC. LIGHTING DEMOLITION PLAN
- E2.0 AUDITORIUM ELECTRICAL NEW WORK PLAN
- E2.1 GYMNASIUM ELEC. LIGHTING NEW WORK PLAN

GENERAL NOTES:

G1 CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING AND COORDINATING ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS. IN CASE OF CONFLICT, THE ARCHITECT SHALL BE NOTIFIED AND SHALL RESOLVE THE CONFLICT.

G2 IN ANY CASE OF CONFLICT BETWEEN THE DRAWINGS AND THE PROJECT SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.

G3 THE CONTRACTOR SHALL MAKE NO DEVIATION FROM DESIGN DRAWINGS WITHOUT PRIOR REVIEW BY THE ARCHITECT.

G4 WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.

G5 ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND LOCAL LAWS AND REGULATIONS.

G6 GENERAL CONTRACTOR SHALL COORDINATE LOCATIONS OF OPENINGS, PITS, BOXES, SLUMPS, TRENCHES, SLEEVES, DEPRESSIONS, GROOVES, AND CHAMFERS, WITH MECHANICAL, ELECTRICAL AND PLUMBING TRADES.

G7 THE STRUCTURAL DESIGN OF THE BUILDING IS BASED ON THE FULL INTERACTION OF ALL ITS COMPONENT PARTS. NO PROVISIONS HAVE BEEN MADE FOR CONDITIONS OCCURRING DURING CONSTRUCTION. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE PROPER AND ADEQUATE PROVISIONS FOR STABILITY OF, AND ALL STRESSES TO, THE STRUCTURE DUE TO ANY CAUSE DURING CONSTRUCTION.

G8 CONTRACTOR SHALL NOT SCALE DRAWINGS. CONTRACTOR SHALL REQUEST ALL DIMENSIONS OR INFORMATION REQUIRED TO PERFORM THE WORK FROM THE ARCHITECT. WORK COMPLETED BY THE CONTRACTOR WITHOUT DIMENSIONS OR INFORMATION SHALL BE DONE AT HIS OWN RISK AND SHALL BE REMOVED AND REINSTALLED TO THE SPECIFICATIONS OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

G9 MEANS AND METHODS OF CONSTRUCTION AS WELL AS COMPLIANCE WITH OSHA AND OTHER SAFETY LAWS AND REGULATIONS IS EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR, HIS SUBCONTRACTOR(S), SUPPLIERS, CONSULTANTS AND SERVANTS.

LIST OF ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR
APPROX.	APPROXIMATE
BIT.	BITUMINOUS
CB	CATCH BASIN
CMU	CONCRETE MASONRY UNIT
CONC.	CONCRETE
CONT.	CONTINUOUS
EQ.	EQUAL
E.V.V.	EACH WAY
FD	FLOOR DRAIN
HC	HANDICAP
HT	HEIGHT
I IN	INVERT IN
I OUT	INVERT OUT
ID	INTERIOR DIAMETER
L.C.C.	LEAD COATED COPPER
MAX.	MAXIMUM
MIN.	MINIMUM
N/A	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OD	OVERHEAD DOOR
O.H.	OPPOSITE HAND
P.A.V.	PAVERS
P.T.	PRESSURE TREATED
SIM.	SIMILAR TO
S.S.	STAINLESS STEEL
T.	TREAD
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
V.I.F.	VERIFY IN FIELD
V.C.B.	VINYL COVE BASE
W/	WITH
Z.C.C.	ZINC COATED STEEL
Ø	DIAMETER
+/-	PLUS OR MINUS

SYMBOL LEGEND

	SEE DETAIL 88 ON SHEET AX-XX
	BREAK LINE
	DIMENSION LINE
	EXTENT
	DOOR TAG
	WINDOW TAG

CONTACT INFORMATION:

Architect



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Owner:

CITY OF WALTHAM
510 Moody Street
Waltham, MA 02453

Contact: Don Cusano, Building Department
p: 781-314-3192
Sandra Tomasello, Recreation Dept
p: 781-314-3476

Drawing Title:

COVER SHEET

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: JAC
Scale: N.T.S.

G0-01

**AUDITORIUM AND
GYMNASIUM
RENOVATIONS**

**WALTHAM
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CENTER**

510 MOODY STREET
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Drawing Title:

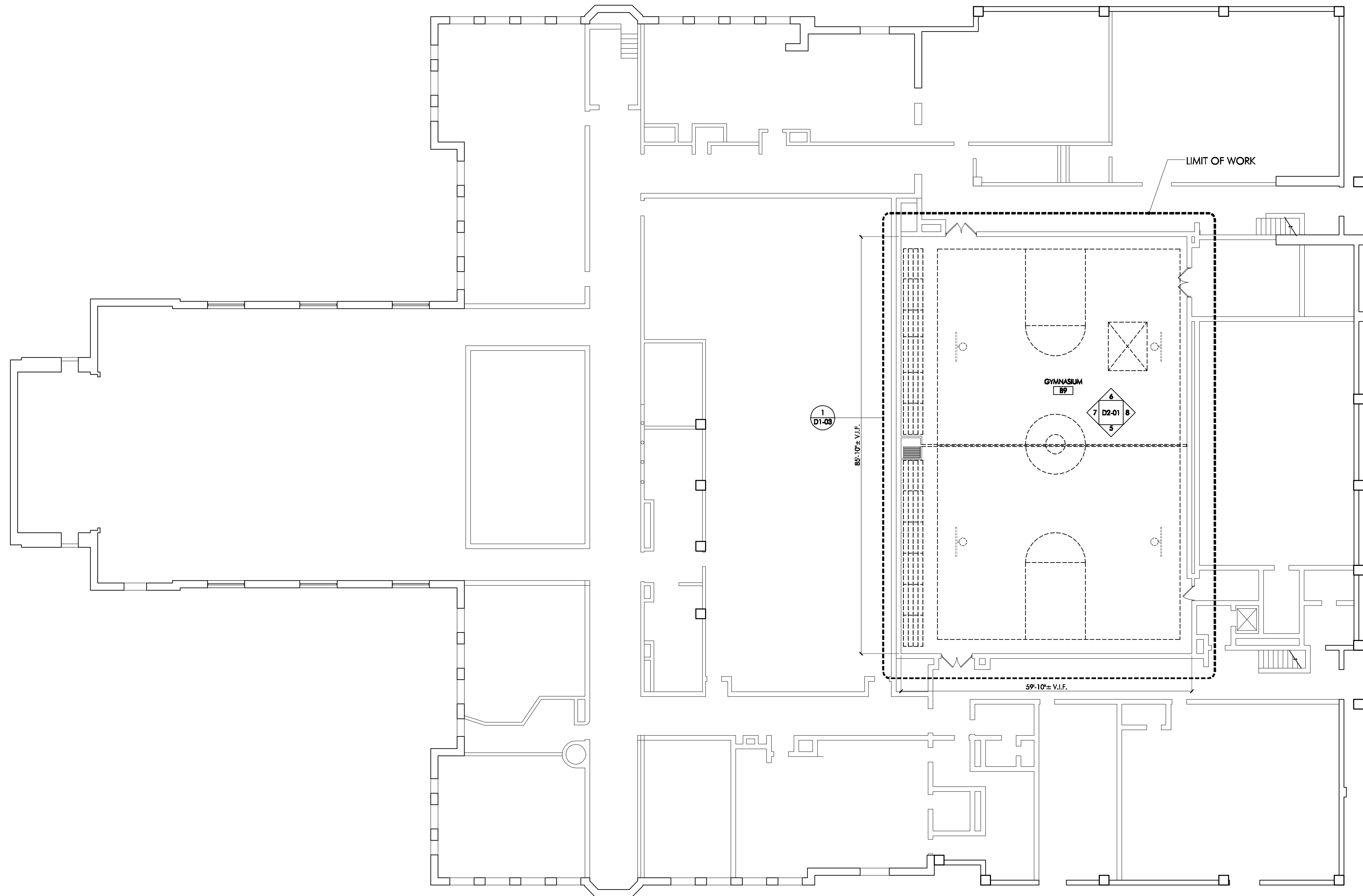
**GROUND FLOOR
DEMOLITION
KEY PLAN**

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 3/32"=1'-0"

DI-01



1 GROUND FLOOR DEMOLITION KEY PLAN
SCALE: 3/32"=1'-0"

**AUDITORIUM AND
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Drawing Title:

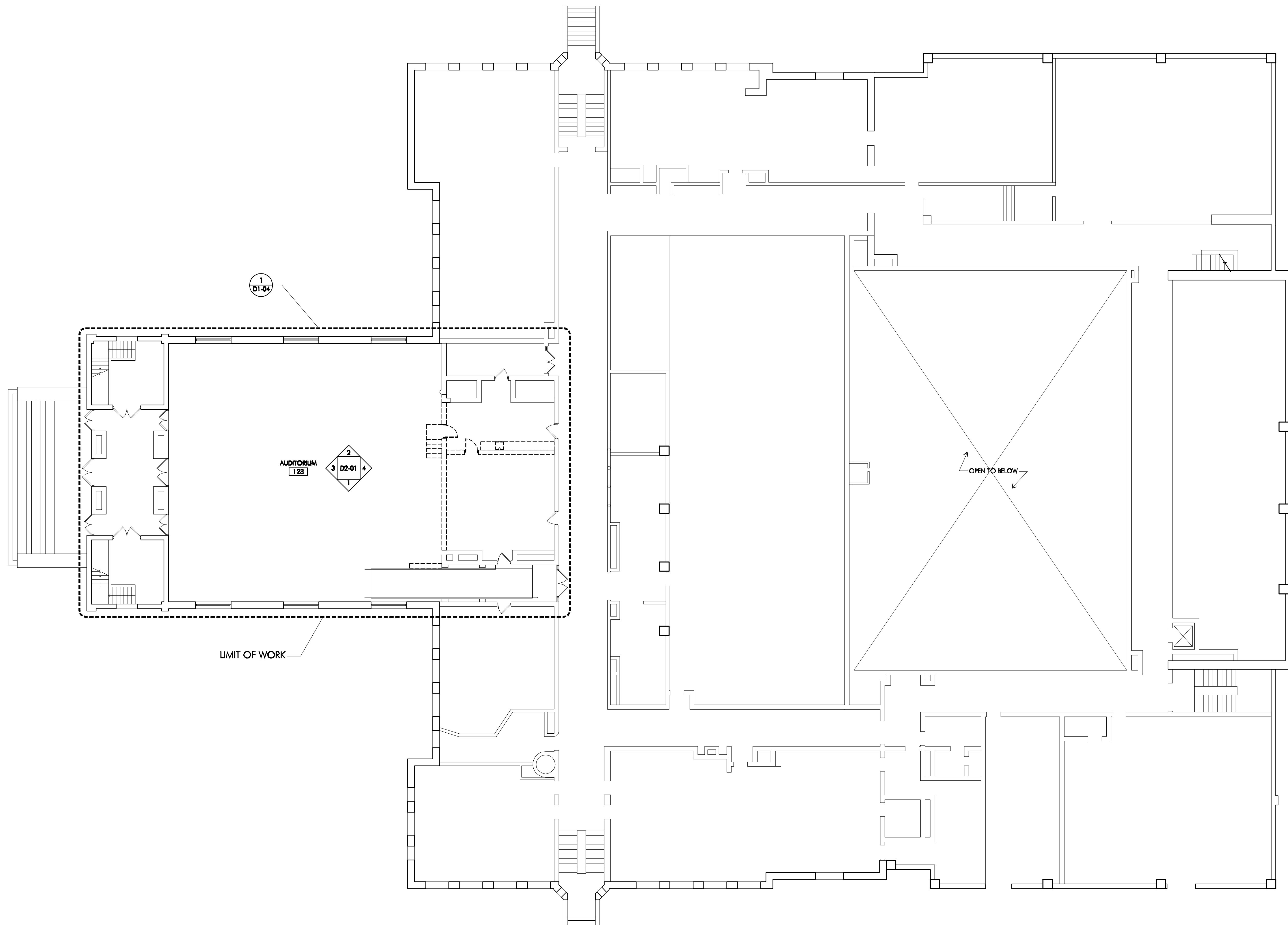
**FIRST FLOOR
DEMOLITION
KEY PLAN**

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 3/32"=1'-0"

DI-02



1
D1-04

AUDITORIUM
123
2
D2-01
3
4

LIMIT OF WORK

OPEN TO BELOW

PS01111066SHEET01 (066 D) 02.dwg Oc 26, 2011 1:45 pm BOSBORNE

1 FIRST FLOOR DEMOLITION KEY PLAN
SCALE: 3/32"=1'-0"

AUDITORIUM AND GYMNASIUM RENOVATIONS

WALTHAM COMMUNITY CENTER

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Drawing Title:

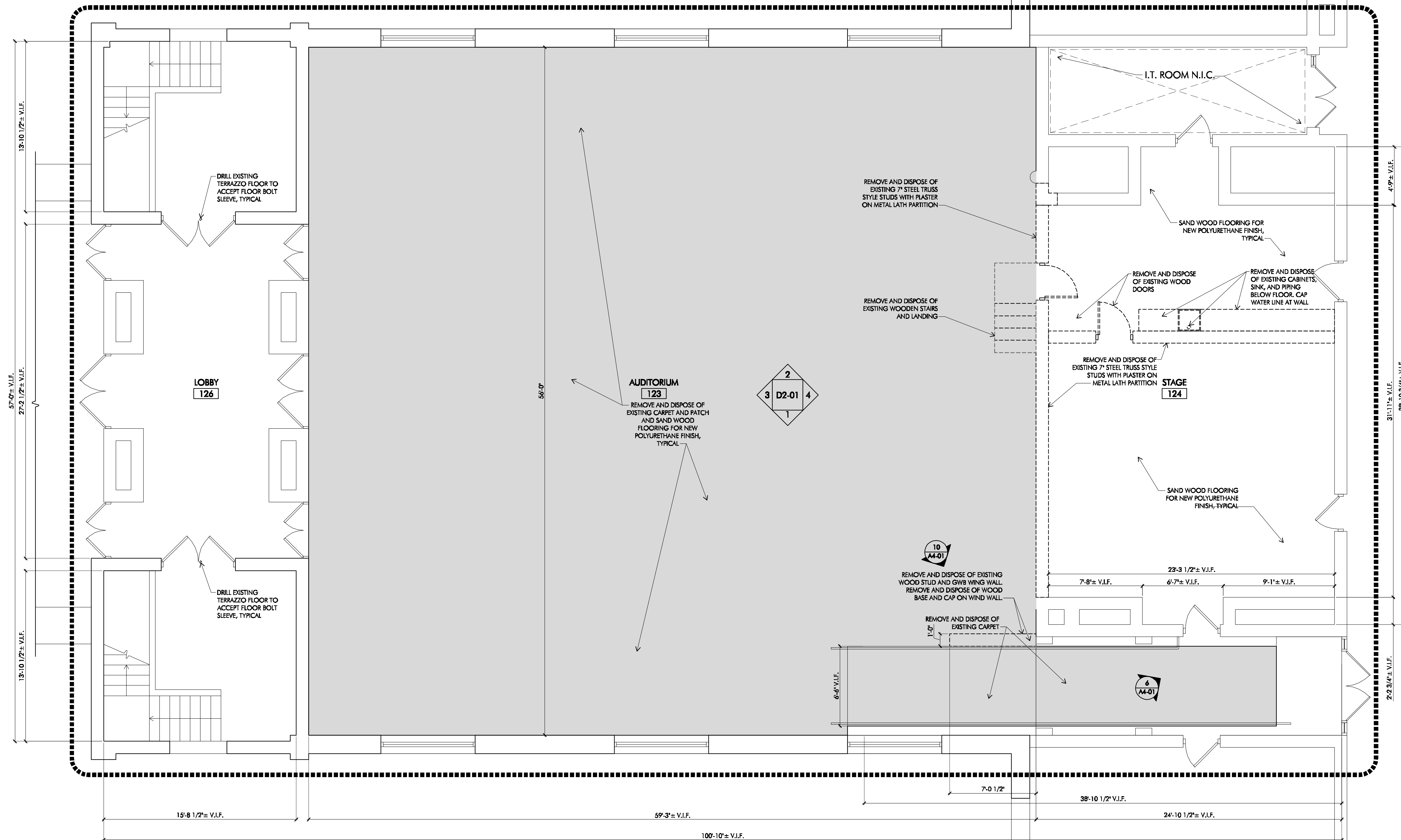
AUDITORIUM DEMOLITION FLOOR PLAN

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

DI-04



LEGEND

- EXISTING CARPET TO BE REMOVED AND DISPOSED OF
- EXISTING WOOD DOOR, FRAME AND HARDWARE TO BE REMOVED AND DISPOSED OF
- EXISTING WOOD DOOR TO REMAIN

TYPICAL DEMOLITION NOTES:

- CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS IN FIELD.
- IN AUDITORIUM, ROOM [123]
 - REMOVE AND DISPOSE OF EXISTING CARPET AND PATCH AND SAND WOOD FLOORING FOR NEW POLYURETHANE FINISH. CONTRACTOR TO INCLUDE 50 SF IN BASE BID IN SMALL AREAS DIRECTED BY THE ARCHITECT AND SEE SPECIFICATION FOR UNIT PRICING, TYPICAL.
- IN STAGE, ROOM [124]
 - REMOVE AND DISPOSE OF EXISTING WOOD STUD AND GWB PARTITION WALLS AS SHOWN, REMOVE AND DISPOSE OF EXISTING WOOD DOORS, FRAMES AND HARDWARE AS SHOWN AND REMOVE AND DISPOSE OF EXISTING CABINETS SINK AND PIPING BELOW FLOOR AND CAP WATER LINE AT WALL AS SHOWN.
 - PATCH AND SAND WOOD FLOORING FOR NEW POLYURETHANE FINISH. CONTRACTOR TO INCLUDE 100 SF IN BASE BID AND SEE SPECIFICATION FOR UNIT PRICING, TYPICAL.

1 LIBRARY DEMOLITION FLOOR PLAN
SCALE: 1/4"=1'-0"

P20111106SHEETS (166 D) 4-4.dwg Oct 26, 2011 1:45 pm BOSBONE

**AUDITORIUM AND
GYMNASIUM
RENOVATIONS**

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WALTHAM, MA 02453

Drawing Title:

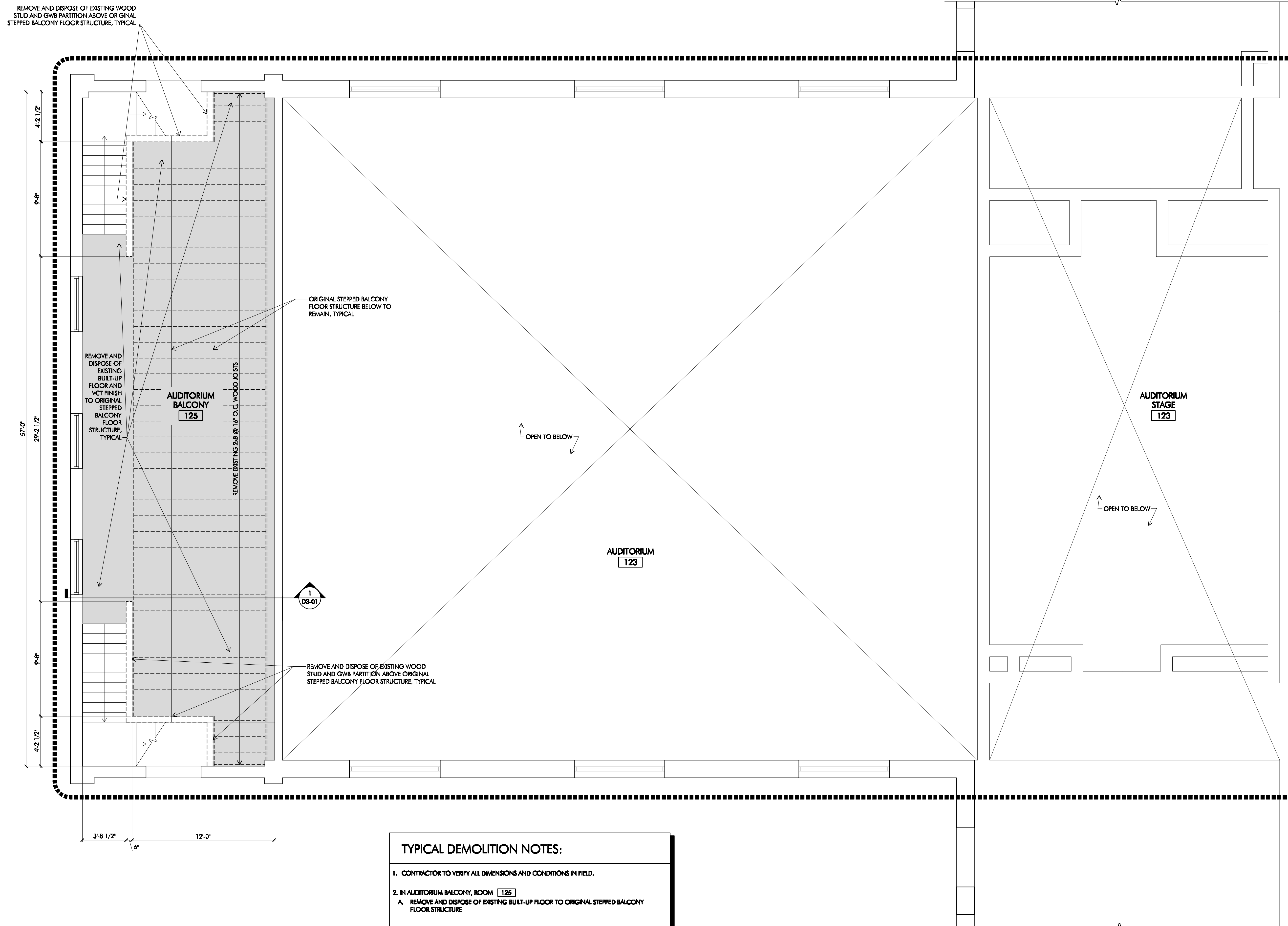
**AUDITORIUM
BALCONY
DEMOLITION PLAN**

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

DI-05



TYPICAL DEMOLITION NOTES:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS IN FIELD.
2. IN AUDITORIUM BALCONY, ROOM 125
 - A. REMOVE AND DISPOSE OF EXISTING BUILT-UP FLOOR TO ORIGINAL STEPPED BALCONY FLOOR STRUCTURE.

P:\2011\1066\1066-SHEETS\1066-DI-05.dwg Oct 26, 2011 1:46 pm BOSBORNE

1 AUDITORIUM BALCONY
DEMOLITION FLOOR PLAN
SCALE: 1/4"=1'-0"

**AUDITORIUM AND
GYMNASIUM
RENOVATIONS**

**WALTHAM
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Drawing Title:

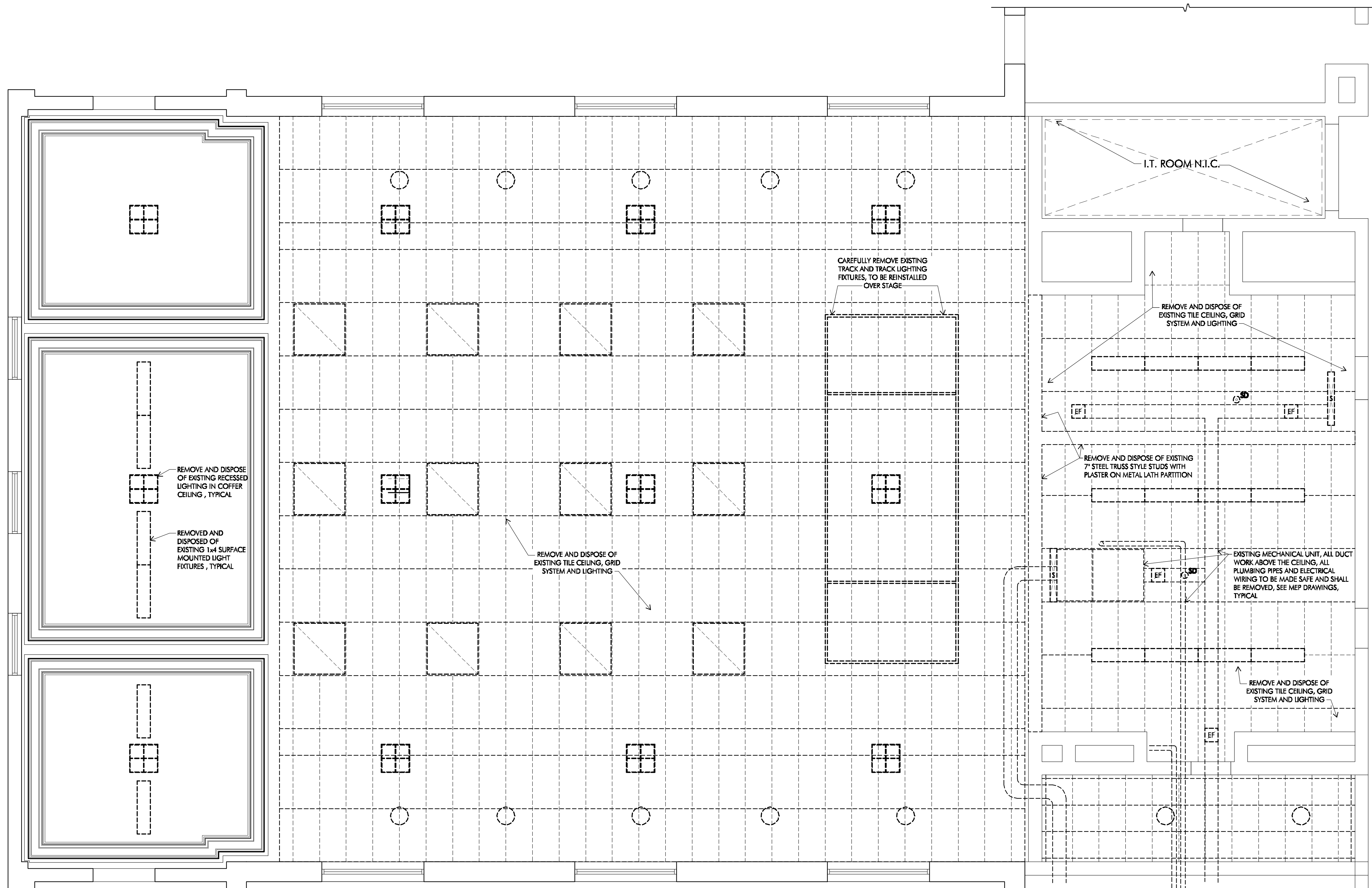
**AUDITORIUM
REFLECTED CEILING
DEMOLITION PLAN**

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

DI-06



RCP DEMOLITION LEGEND:					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	2'-0"x4'-0" S.A.T. GRID TO BE REMOVED AND DISPOSED OF		EXISTING PENDANT MOUNTED GLOBE LIGHT FIXTURE TO BE REMOVED AND DISPOSED OF		EXISTING SUSPENDED EXHAUST FAN TO BE REMOVED AND DISPOSED OF
	2'-0"x2'-0" S.A.T. GRID TO BE REMOVED AND DISPOSED OF		EXISTING CEILING MOUNTED SMOKE DETECTOR TO BE REMOVED AND DISPOSED OF		EXISTING SUSPENDED AIR SUPPLY TO BE REMOVED AND DISPOSED OF
	EXISTING 4"x4" LIGHT FIXTURE TO BE REMOVED AND DISPOSED OF		EXISTING RECESSED LIGHTING IN PLASTER CEILING ABOVE S.A.T. TO BE REMOVED AND DISPOSED OF		
	EXISTING 2"x4" LIGHT FIXTURE TO BE REMOVED AND DISPOSED OF		EXISTING TRACK AND TRACK LIGHTING TO BE CAREFULLY REMOVED TO BE REINSTALLED ABOVE STAGE		

**1 AUDITORIUM REFLECTED CEILING
DEMOLITION PLAN**
SCALE: 1/4"=1'-0"

P:\2011\1066\HEETS\1066 DI-06.dwg Oct 26, 2011 1:49:07 pm BOBBOVNE

**AUDITORIUM AND
GYMNASIUM
RENOVATIONS**

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Drawing Title:

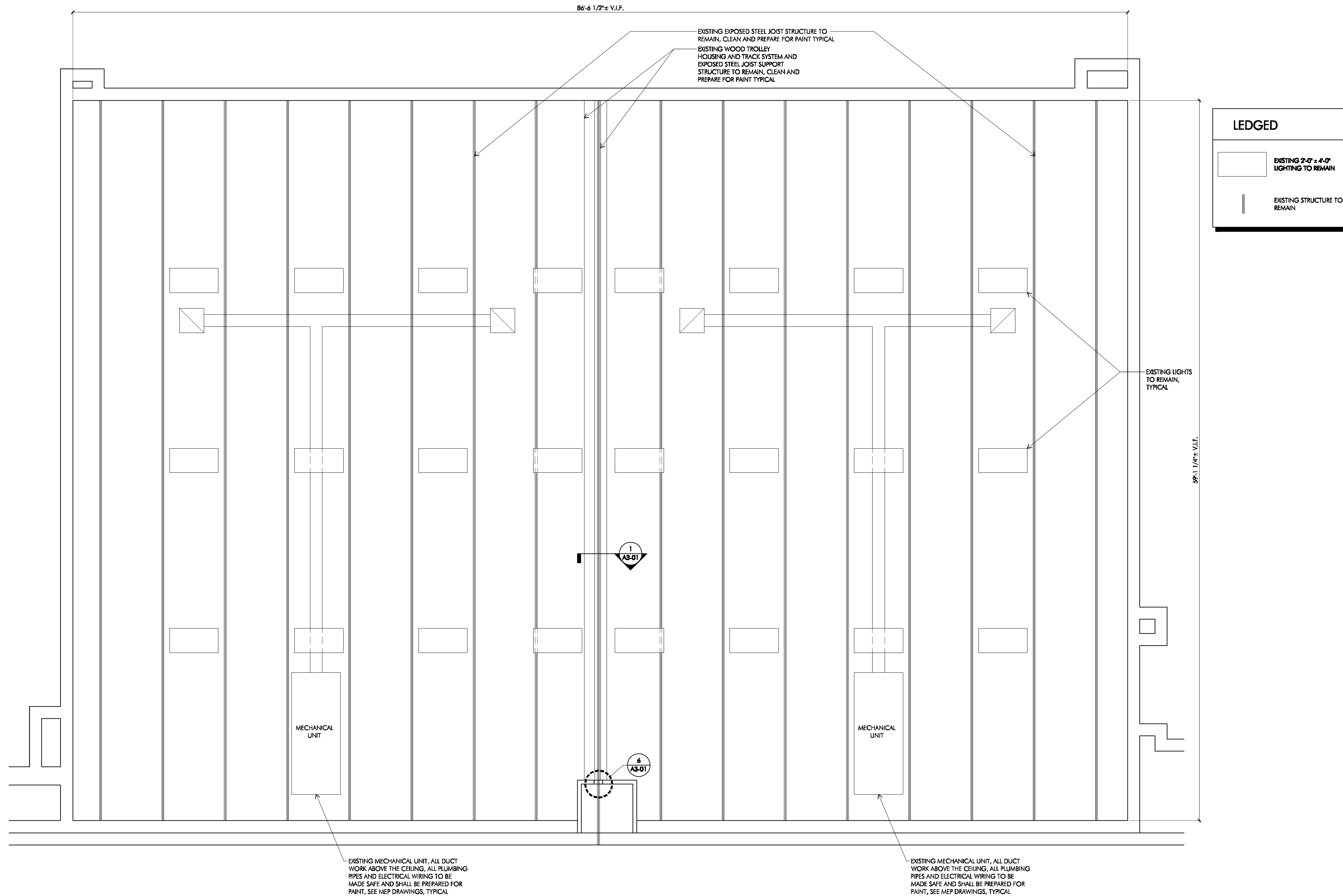
**GYMNASIUM
DEMOLITION
REFLECTED CEILING
PLAN**

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

DI-07



P201111066SHEETS11066-DI-07.dwg Oct 26, 2011 1:40:07 pm BOSBORNE

**1 GYMNASIUM
DEMOLITION REFLECTED CEILING PLAN**
SCALE: 1/4"=1'-0"

**AUDITORIUM AND
GYMNASIUM
RENOVATIONS**

**WALTHAM
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CENTER**

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Drawing Title:

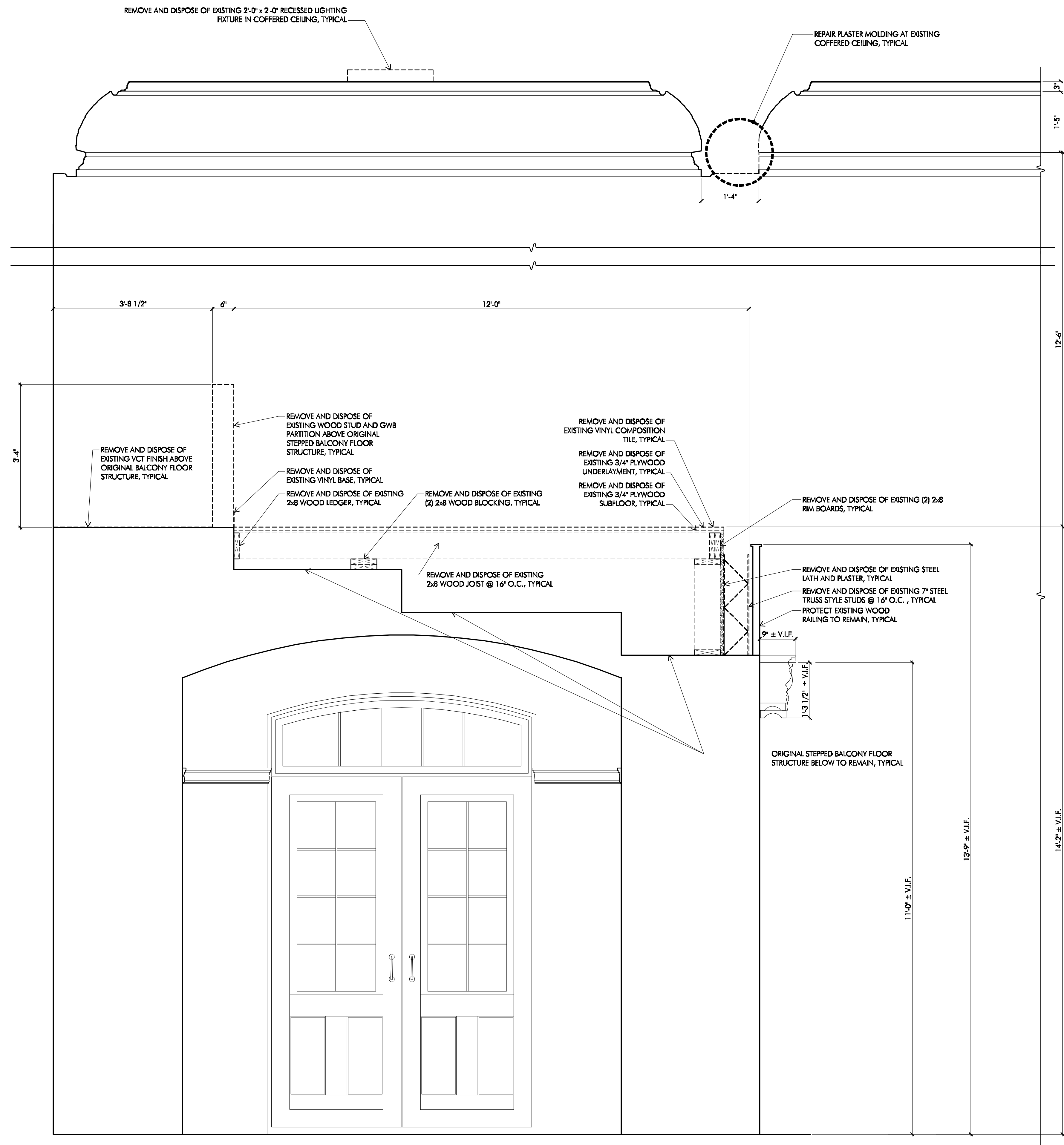
**DEMOLITION
SECTION AT
AUDITORIUM
BALCONY**

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: MW, BLO
Scale: AS NOTED

D3-01



1 DEMOLITION SECTION
AT AUDITORIUM BALCONY
SCALE: 3/4" = 1'-0"

NOTE:
EXISTING CONDITIONS OF BALCONY
PLATFORM SUPPORT SHALL BE FIELD
VERIFIED BY GENERAL CONTRACTOR FOR
REMOVAL AND DISPOSAL

AUDITORIUM AND GYMNASIUM RENOVATIONS

WALTHAM COMMUNITY CENTER

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Drawing Title:

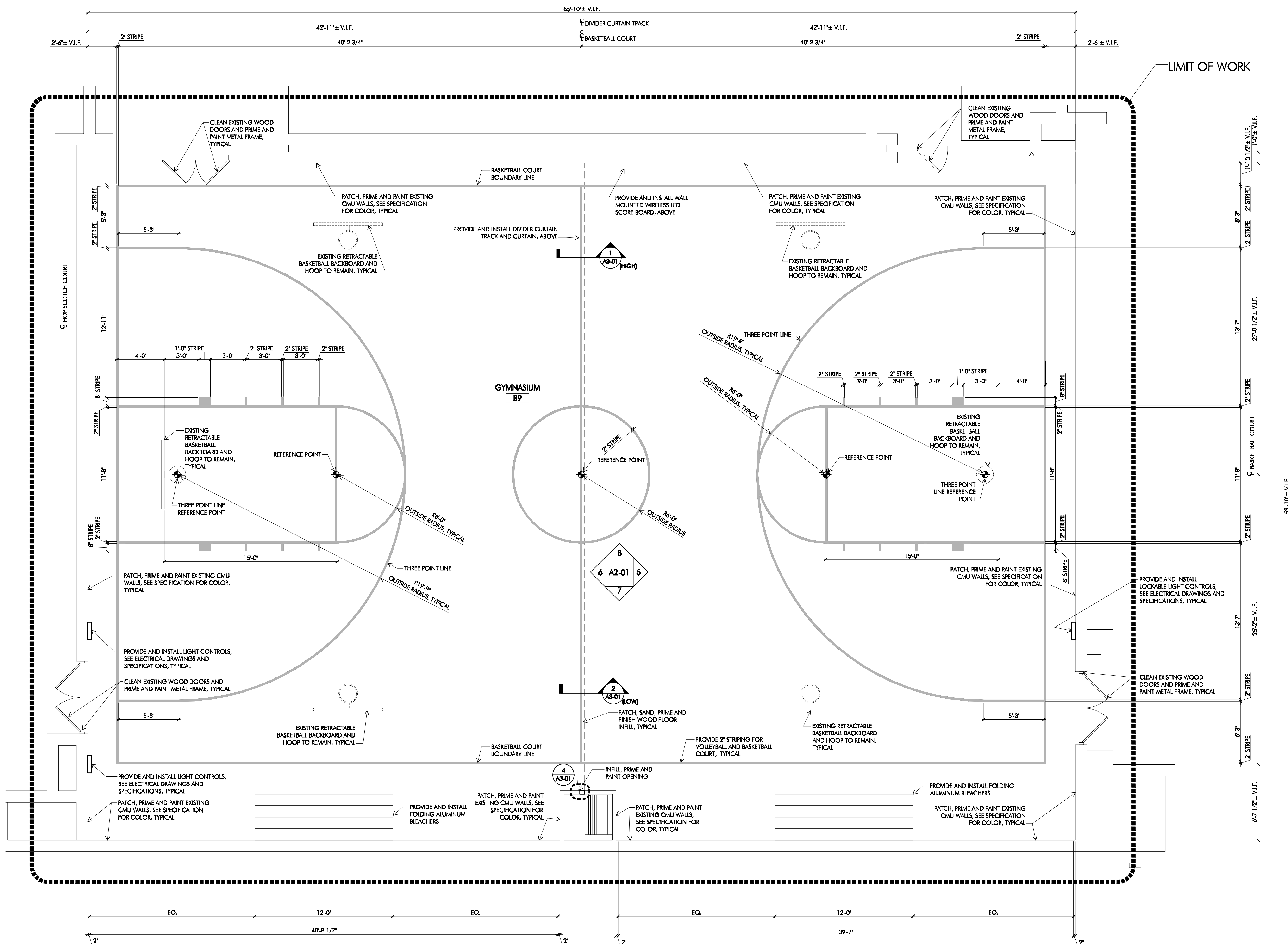
GYMNASIUM FLOOR PLAN

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

AI-01



1 GYM FLOOR PLAN
SCALE: 1/4"=1'-0"

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AUDITORIUM AND GYMNASIUM RENOVATIONS

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Drawing Title:

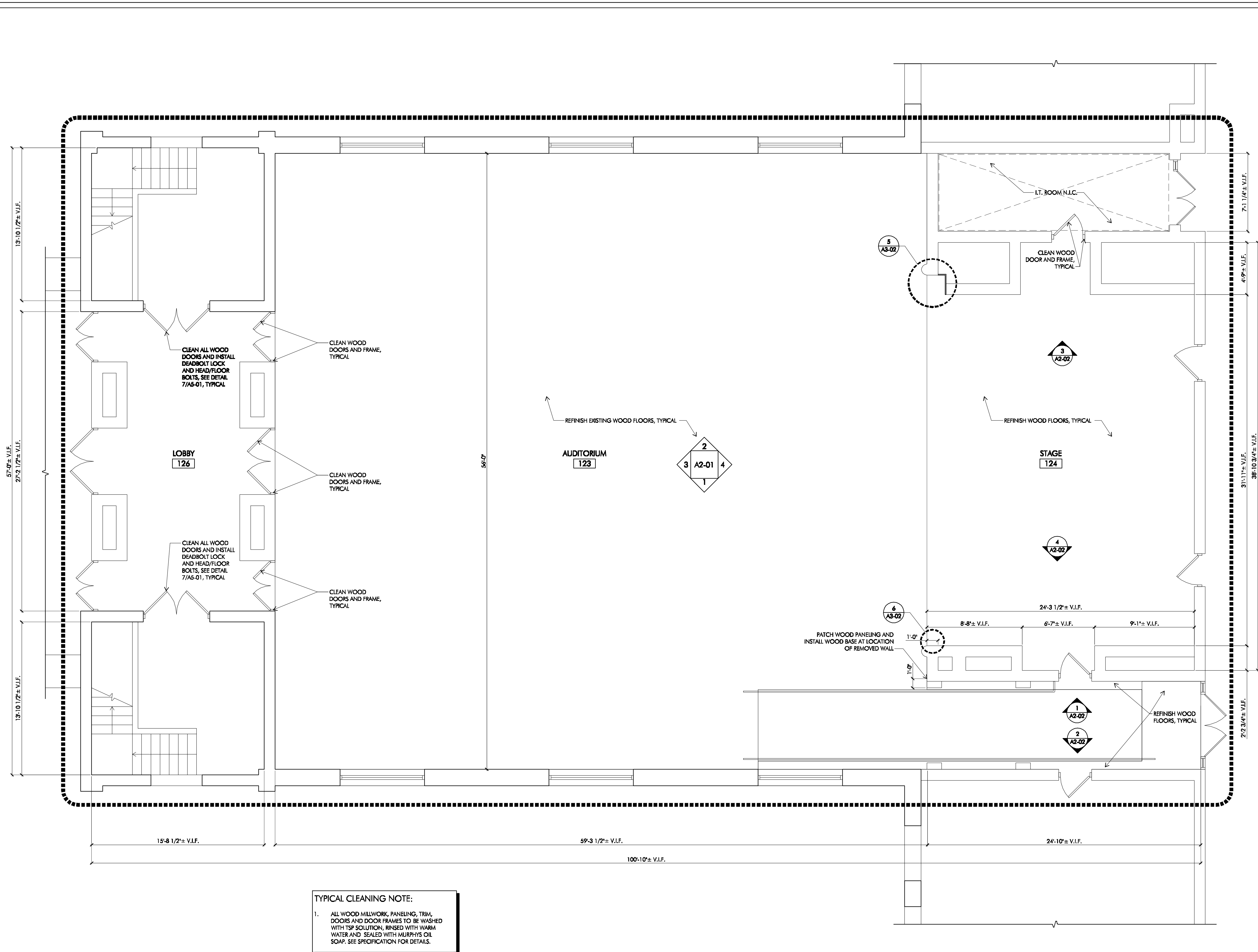
AUDITORIUM FLOOR PLAN

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

A1-02



TYPICAL CLEANING NOTE:

- ALL WOOD MILLWORK, PANELING, TRIM, DOORS AND DOOR FRAMES TO BE WASHED WITH TSP SOLUTION, RINSED WITH WARM WATER AND SEALED WITH MURPHY'S OIL SOAP. SEE SPECIFICATION FOR DETAILS.

1 AUDITORIUM FLOOR PLAN

SCALE: 1/4"=1'-0"



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AUDITORIUM AND GYMNASIUM RENOVATIONS

WALTHAM COMMUNITY CENTER

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Drawing Title:

AUDITORIUM BALCONY FLOOR PLAN

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 3/32"=1'-0"

AI-03

LIMIT OF WORK

EXISTING TIERED BALCONY TO REMAIN

AUDITORIUM BALCONY
125

OPEN TO BELOW

AUDITORIUM
123

AUDITORIUM STAGE
123

OPEN TO BELOW

PS01111066SHEETS11066 AI-03.dwg Oc-26, 2011 - 4:10 pm BOS/DONE

1 AUDITORIUM BALCONY FLOOR PLAN

SCALE: 1/4"=1'-0"

**AUDITORIUM AND
GYMNASIUM
RENOVATIONS**

**WALTHAM
COMMUNITY
CENTER**

510 MOODY STREET
WALTHAM, MA 02453

Drawing Title:

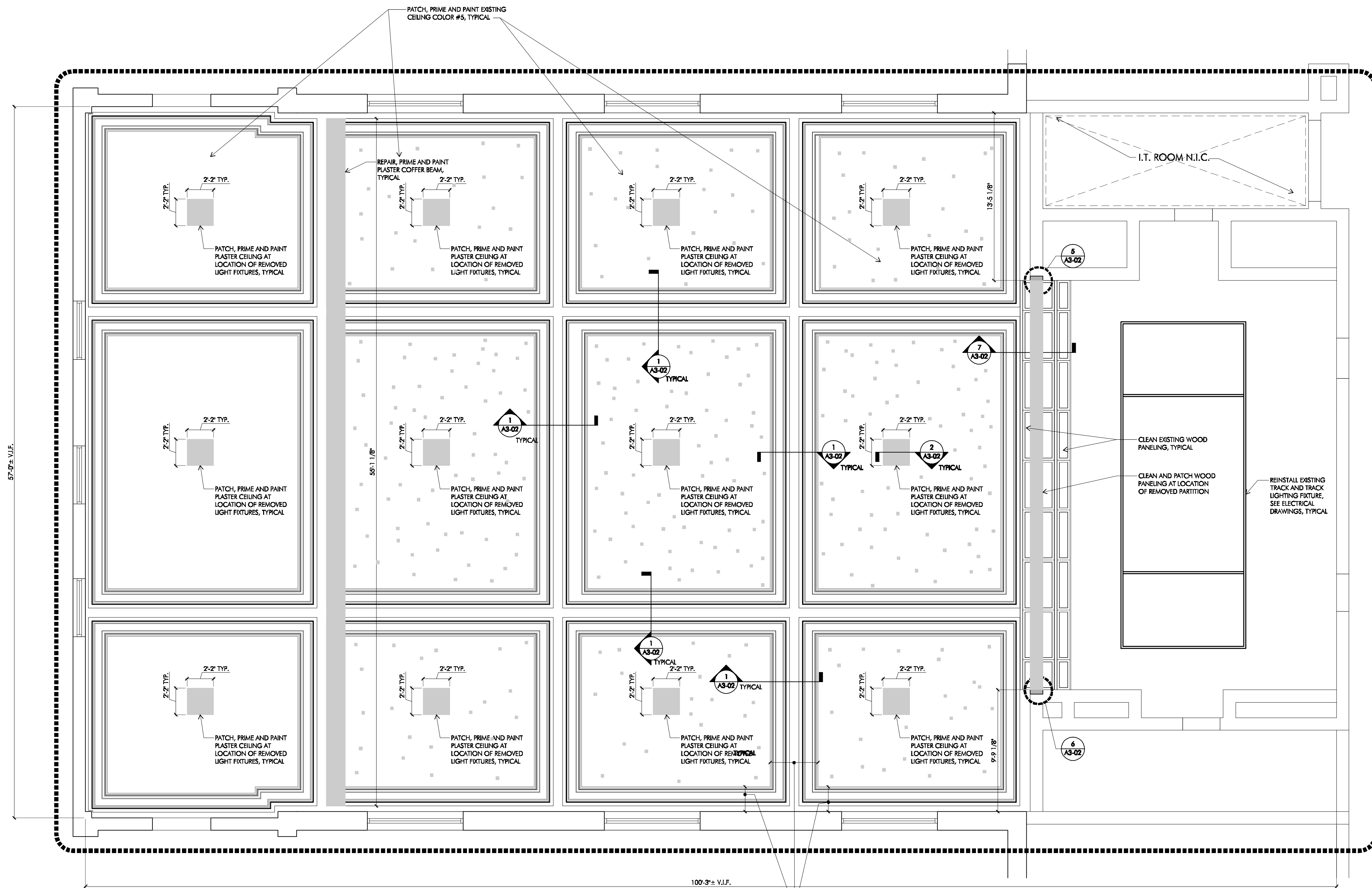
**AUDITORIUM
REFLECTED CEILING
PLAN**

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

AI-04



LEGEND

- PATCH EXISTING PLASTER AT COFFER BEAM
- PATCH LARGE AREAS OF EXISTING PLASTER
- PATCH SMALL AREAS OF EXISTING PLASTER

TYPICAL PLASTER REPAIR NOTE:
1. PATCH AND REPAIR EXISTING PLASTER CEILING AT ALL DAMAGED LOCATIONS. SEE SPECIFICATIONS FOR QUANTITIES AND UNIT PRICING.

1 AUDITORIUM REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"

P20111106(S)SHEETS | 1066 AI-04.dwg | Cc: 26, 2011 - 4:10 pm | BOSBORNE

**AUDITORIUM AND
GYMNASIUM
RENOVATIONS**

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Drawing Title:

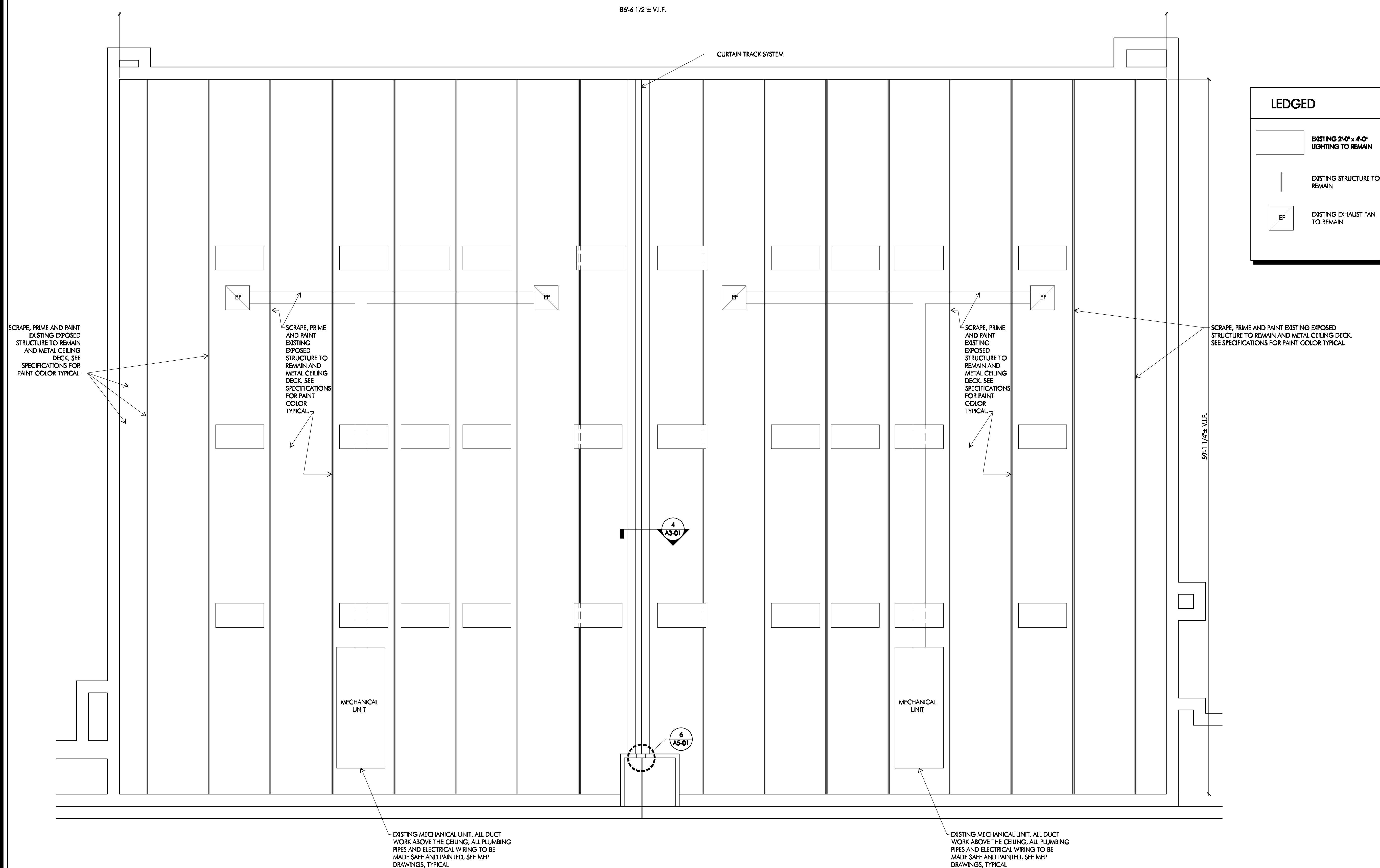
**GYMNASIUM
REFLECTED
CEILING PLAN**

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

A1-05



LEDGED	
	EXISTING 2'-0" x 4'-0" LIGHTING TO REMAIN
	EXISTING STRUCTURE TO REMAIN
	EXISTING EXHAUST FAN TO REMAIN

SCRAPE, PRIME AND PAINT EXISTING EXPOSED STRUCTURE TO REMAIN AND METAL CEILING DECK. SEE SPECIFICATIONS FOR PAINT COLOR TYPICAL.

SCRAPE, PRIME AND PAINT EXISTING EXPOSED STRUCTURE TO REMAIN AND METAL CEILING DECK. SEE SPECIFICATIONS FOR PAINT COLOR TYPICAL.

SCRAPE, PRIME AND PAINT EXISTING EXPOSED STRUCTURE TO REMAIN AND METAL CEILING DECK. SEE SPECIFICATIONS FOR PAINT COLOR TYPICAL.

SCRAPE, PRIME AND PAINT EXISTING EXPOSED STRUCTURE TO REMAIN AND METAL CEILING DECK. SEE SPECIFICATIONS FOR PAINT COLOR TYPICAL.

EXISTING MECHANICAL UNIT, ALL DUCT WORK ABOVE THE CEILING, ALL PLUMBING PIPES AND ELECTRICAL WIRING TO BE MADE SAFE AND PAINTED, SEE MEP DRAWINGS, TYPICAL.

EXISTING MECHANICAL UNIT, ALL DUCT WORK ABOVE THE CEILING, ALL PLUMBING PIPES AND ELECTRICAL WIRING TO BE MADE SAFE AND PAINTED, SEE MEP DRAWINGS, TYPICAL.

1 GYM REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"

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AUDITORIUM AND GYMNASIUM RENOVATIONS

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510 MOODY STREET
WALTHAM, MA 02453

Drawing Title:

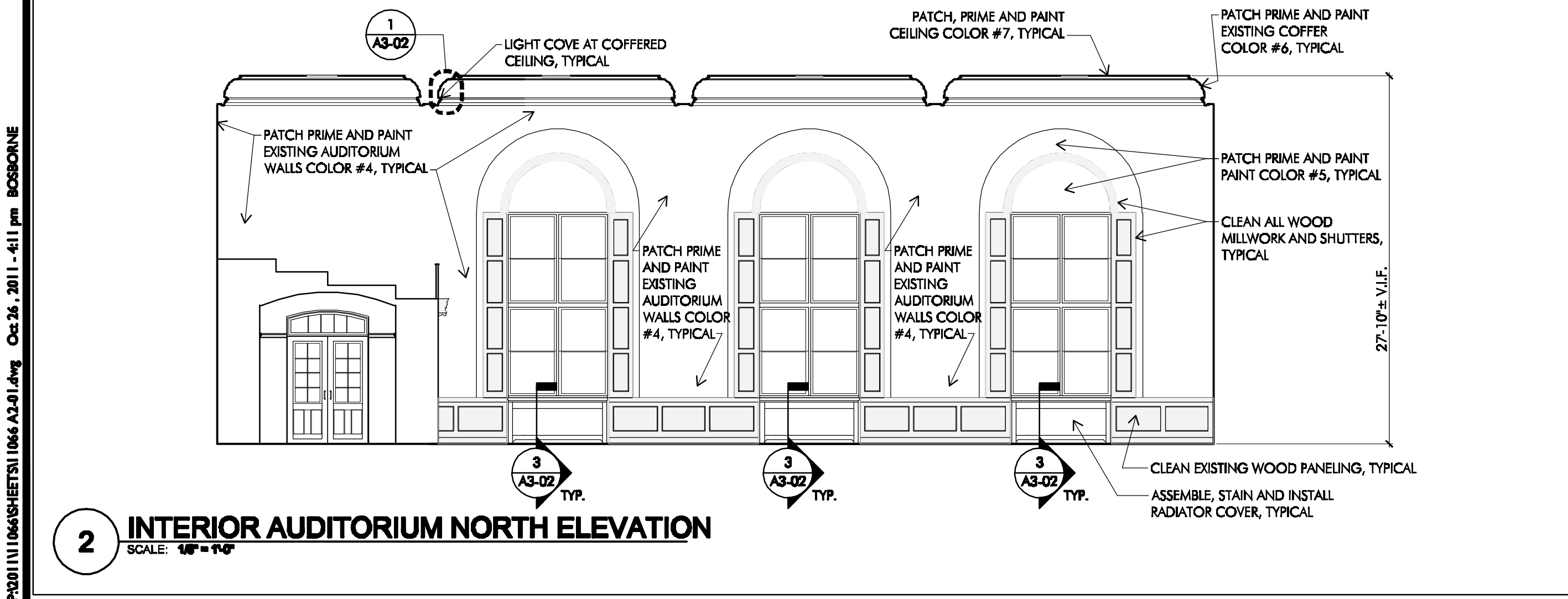
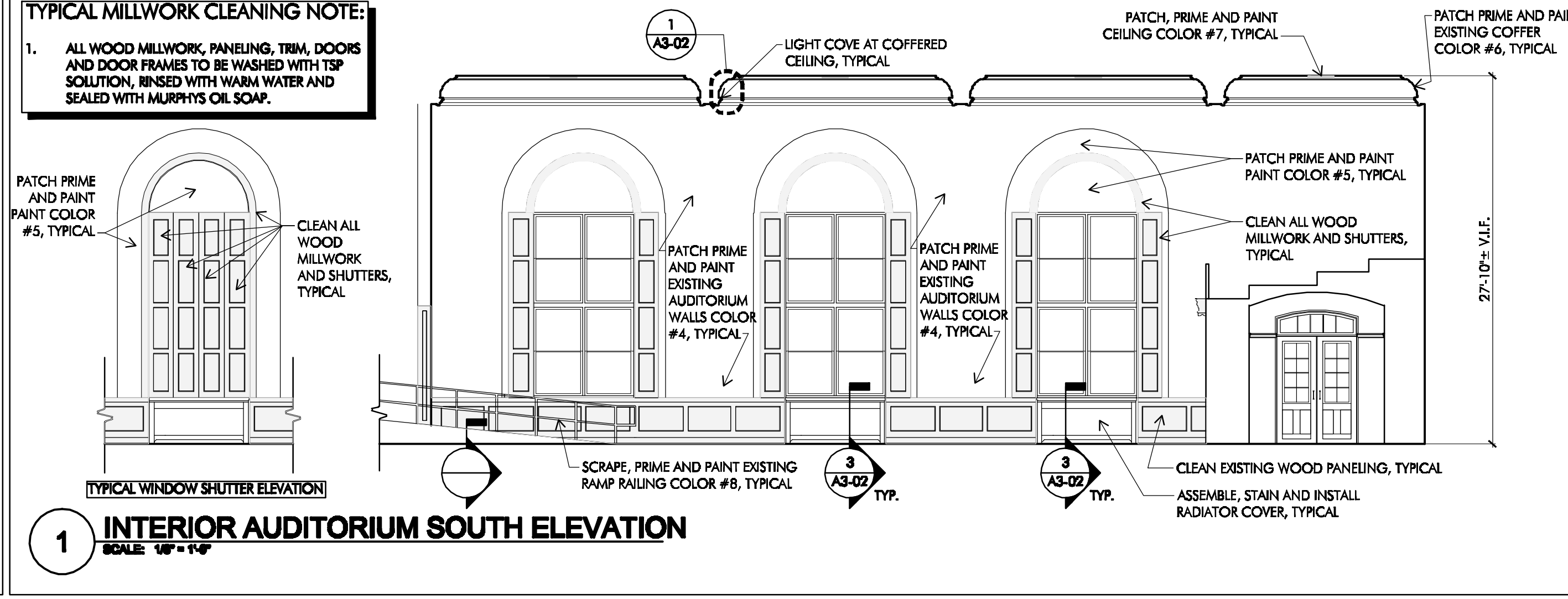
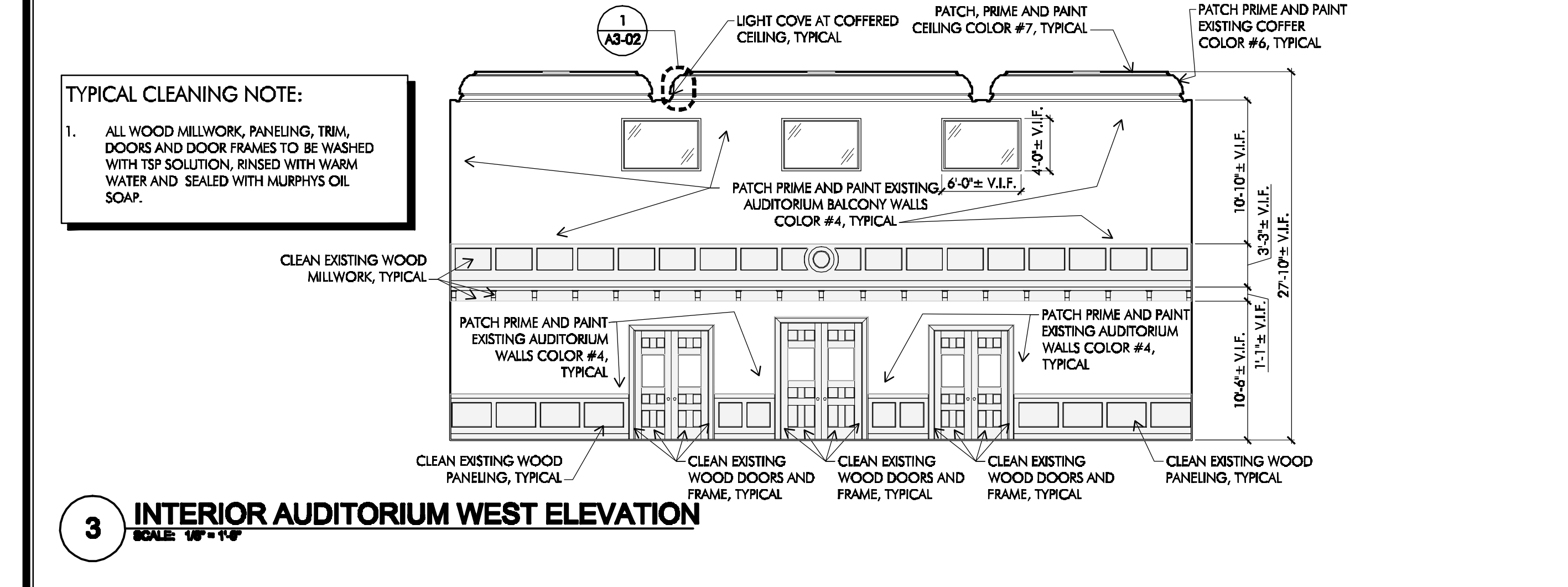
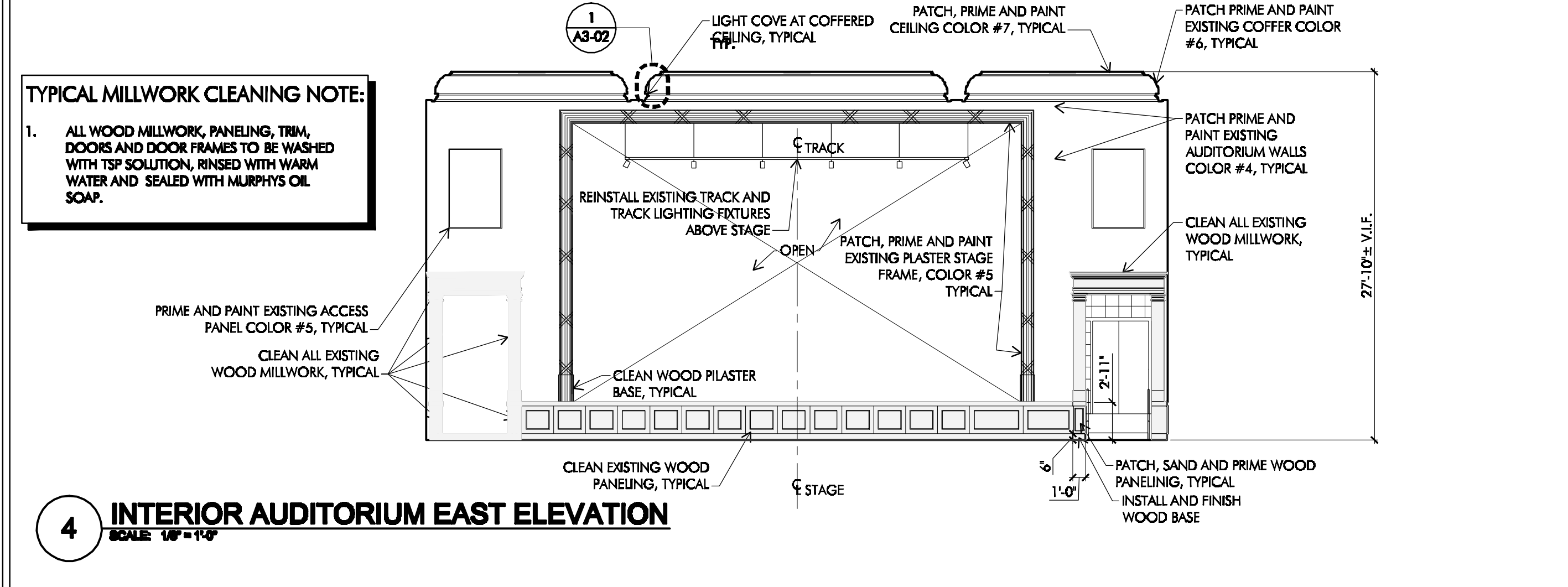
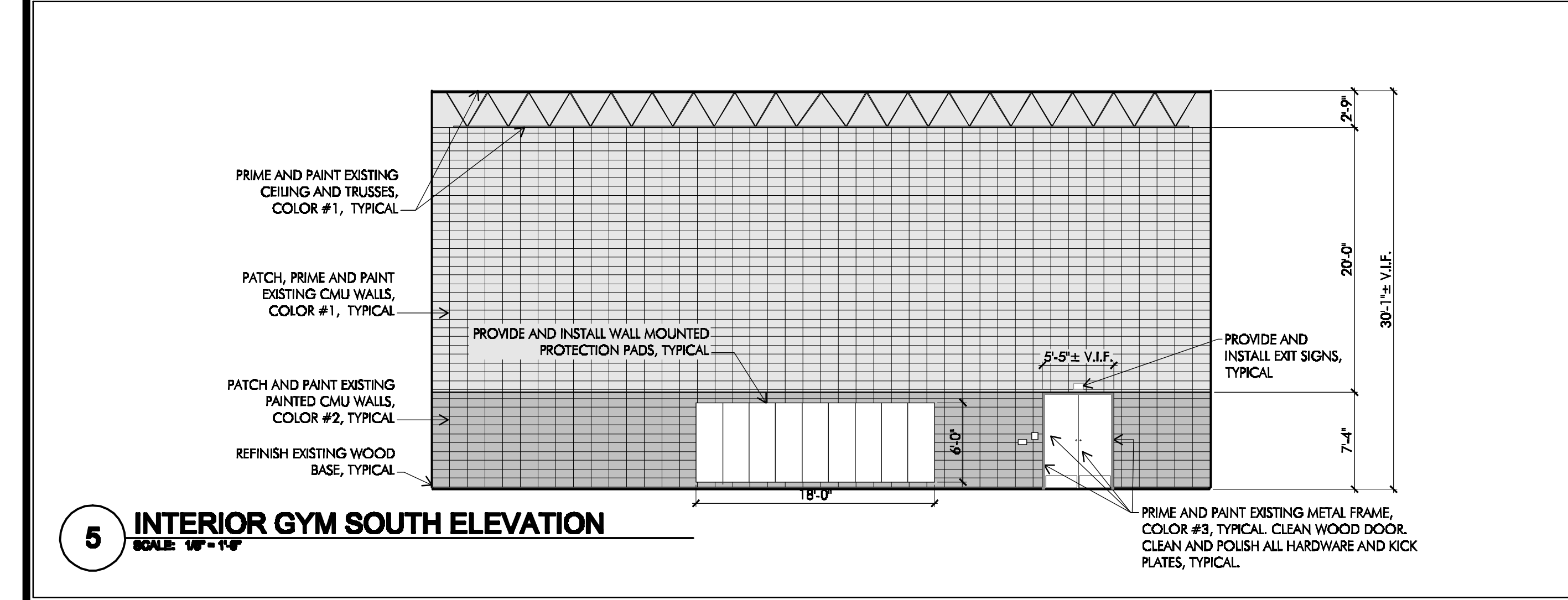
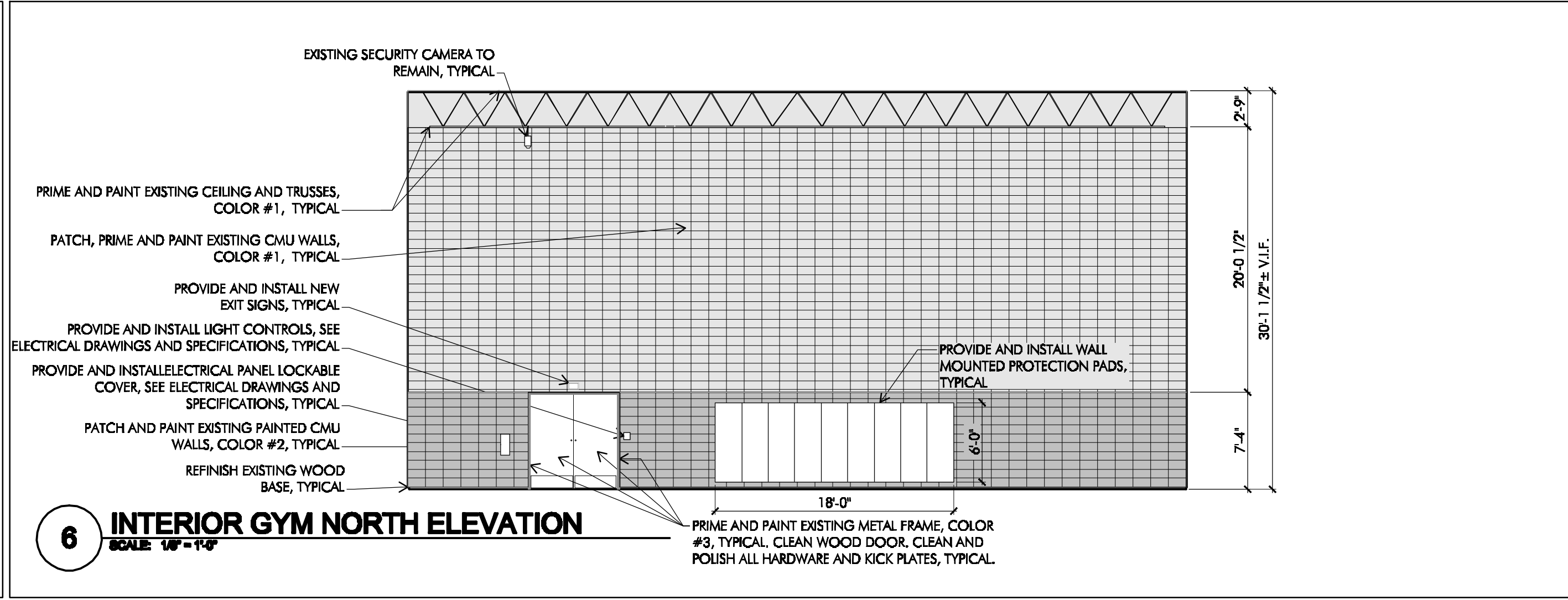
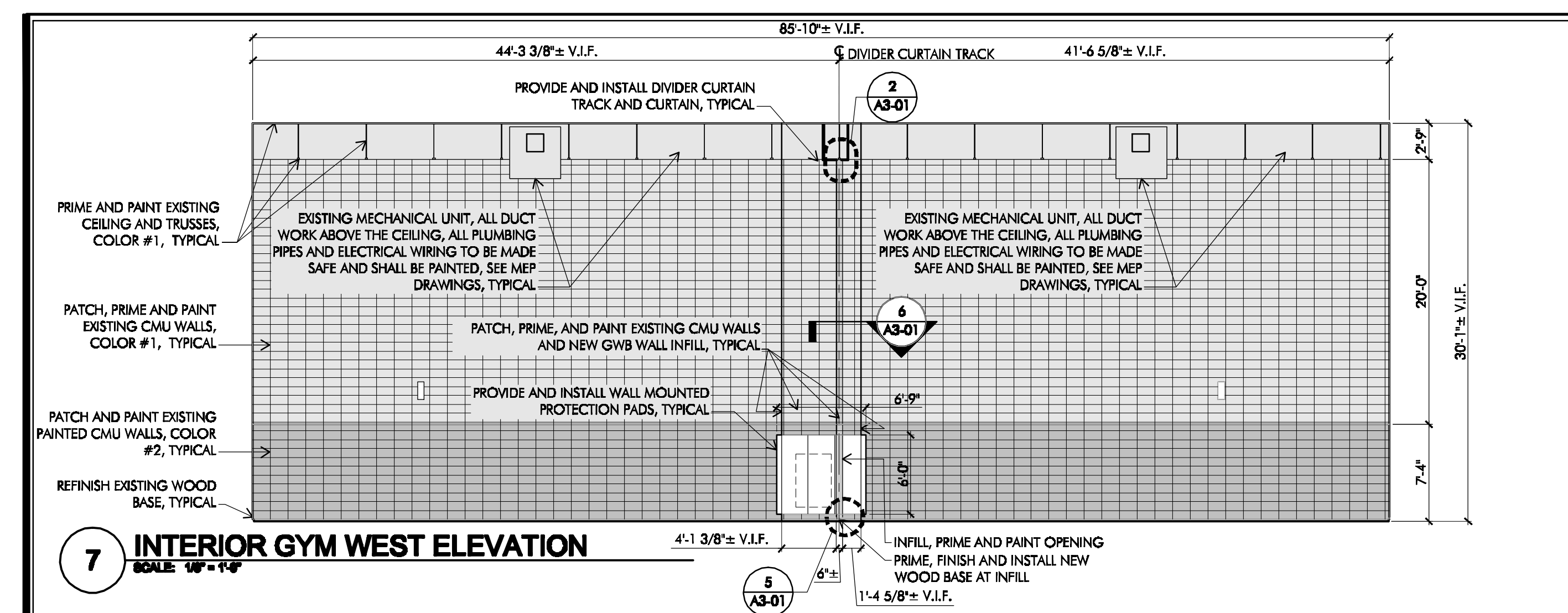
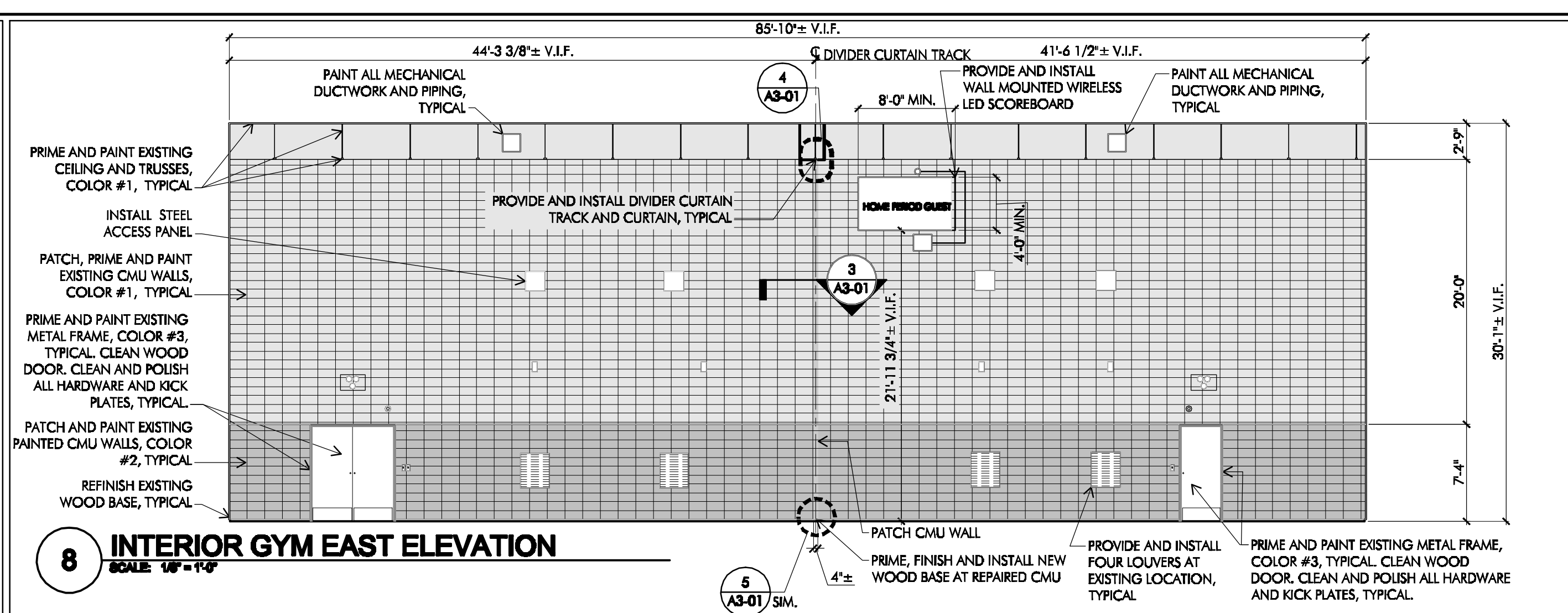
INTERIOR ELEVATIONS

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: JAC. BLO
Scale: 1/8"=1'-0"

A2-01

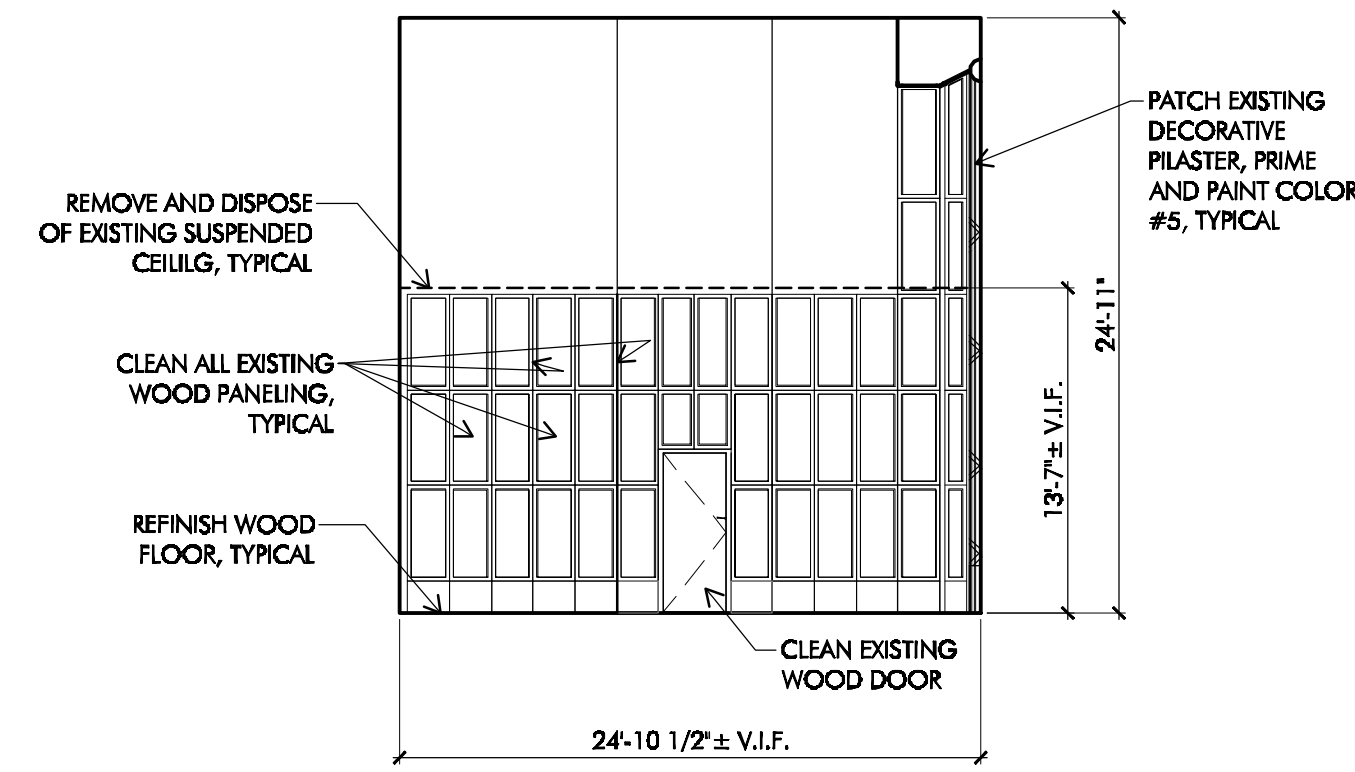


TYPICAL MILLWORK CLEANING NOTE:
1. ALL WOOD MILLWORK, PANELING, TRIM, DOORS AND DOOR FRAMES TO BE WASHED WITH TSP SOLUTION, RINSED WITH WARM WATER AND SEALED WITH MURPHY'S OIL SOAP.

TYPICAL CLEANING NOTE:
1. ALL WOOD MILLWORK, PANELING, TRIM, DOORS AND DOOR FRAMES TO BE WASHED WITH TSP SOLUTION, RINSED WITH WARM WATER AND SEALED WITH MURPHY'S OIL SOAP.

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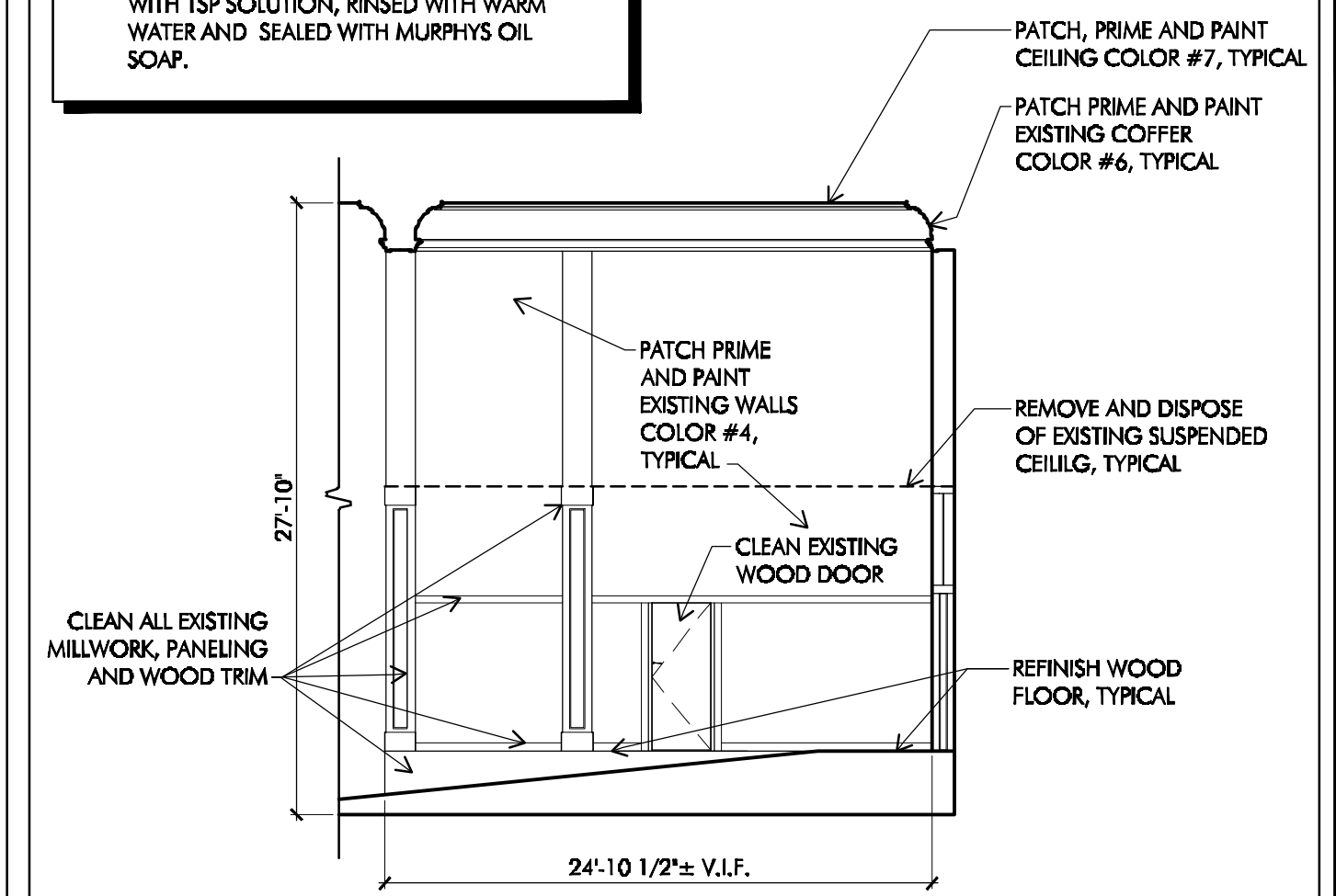
PS01111066SHEET01 (1066 A2-02.dwg) Oc-26, 2011 - 4:12 pm BOS/DONE



4 AUDITORIUM STAGE NORTH ELEVATION
SCALE: 1/8"=1'-0"

TYPICAL CLEANING NOTE:
1. ALL WOOD MILLWORK, PANELING, TRIM, DOORS AND DOOR FRAMES TO BE WASHED WITH TSP SOLUTION, RINSED WITH WARM WATER AND SEALED WITH MURPHY'S OIL SOAP.

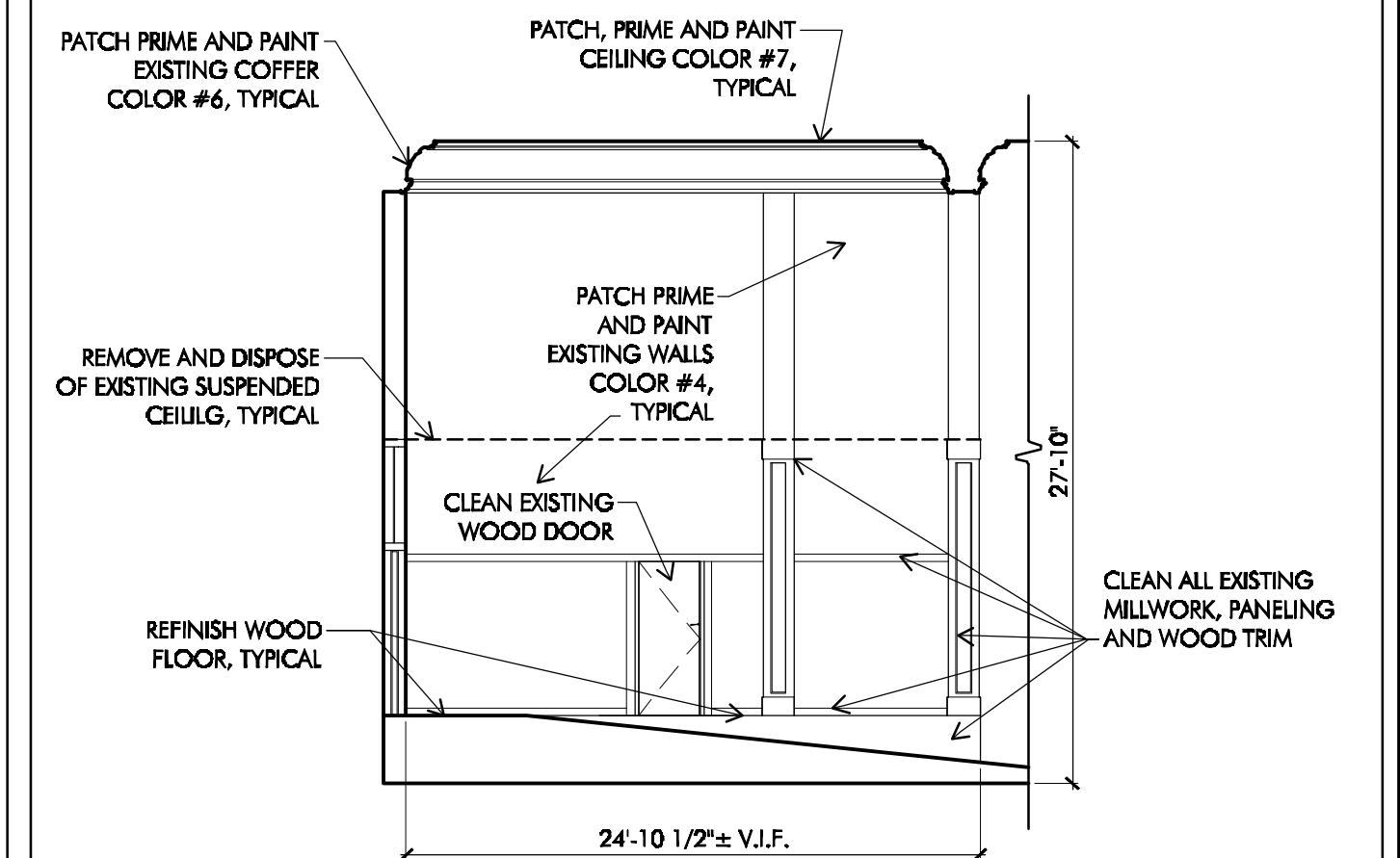
NOTE: RAMP RAIL NOT SHOWN FOR CLARITY



1 AUDITORIUM RAMP NORTH ELEVATION
SCALE: 1/8"=1'-0"

TYPICAL CLEANING NOTE:
1. ALL WOOD MILLWORK, PANELING, TRIM, DOORS AND DOOR FRAMES TO BE WASHED WITH TSP SOLUTION, RINSED WITH WARM WATER AND SEALED WITH MURPHY'S OIL SOAP.

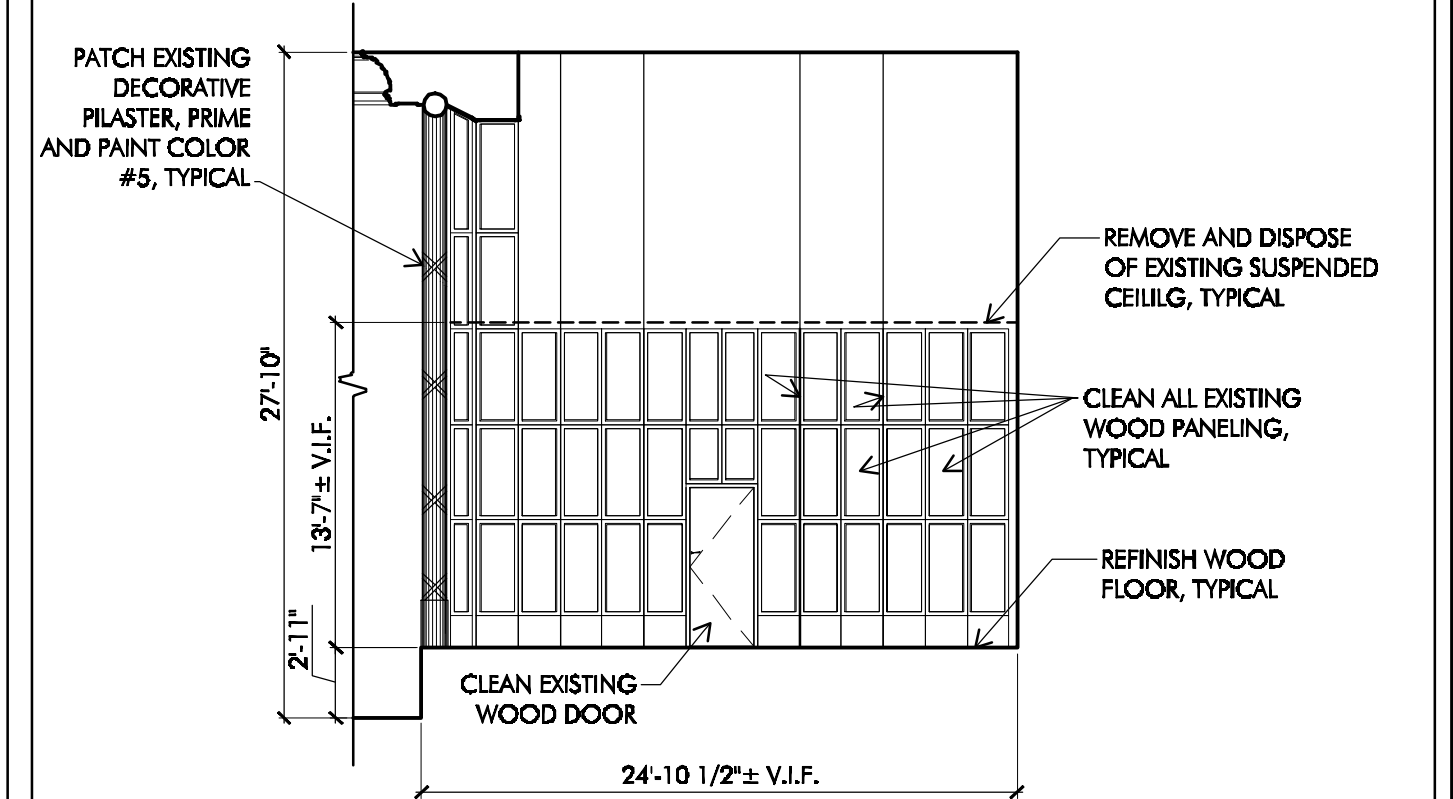
NOTE: RAMP RAIL NOT SHOWN FOR CLARITY



2 AUDITORIUM RAMP NORTH ELEVATION
SCALE: 1/8"=1'-0"

TYPICAL CLEANING NOTE:
1. ALL WOOD MILLWORK, PANELING, TRIM, DOORS AND DOOR FRAMES TO BE WASHED WITH TSP SOLUTION, RINSED WITH WARM WATER AND SEALED WITH MURPHY'S OIL SOAP.

NOTE: RAMP RAIL NOT SHOWN FOR CLARITY



3 AUDITORIUM STAGE NORTH ELEVATION
SCALE: 1/8"=1'-0"



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AUDITORIUM AND GYMNASIUM RENOVATIONS

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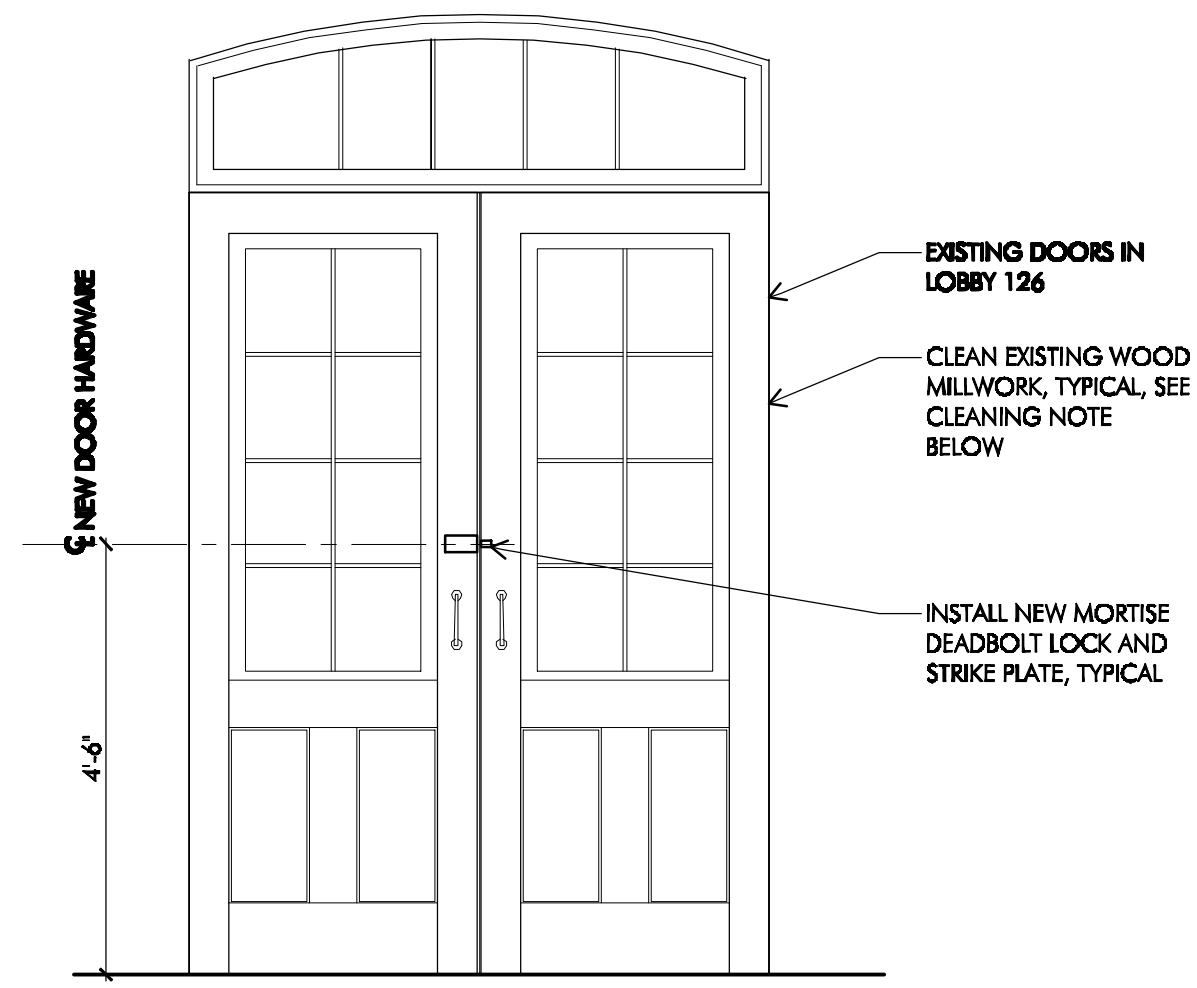
INTERIOR ELEVATIONS

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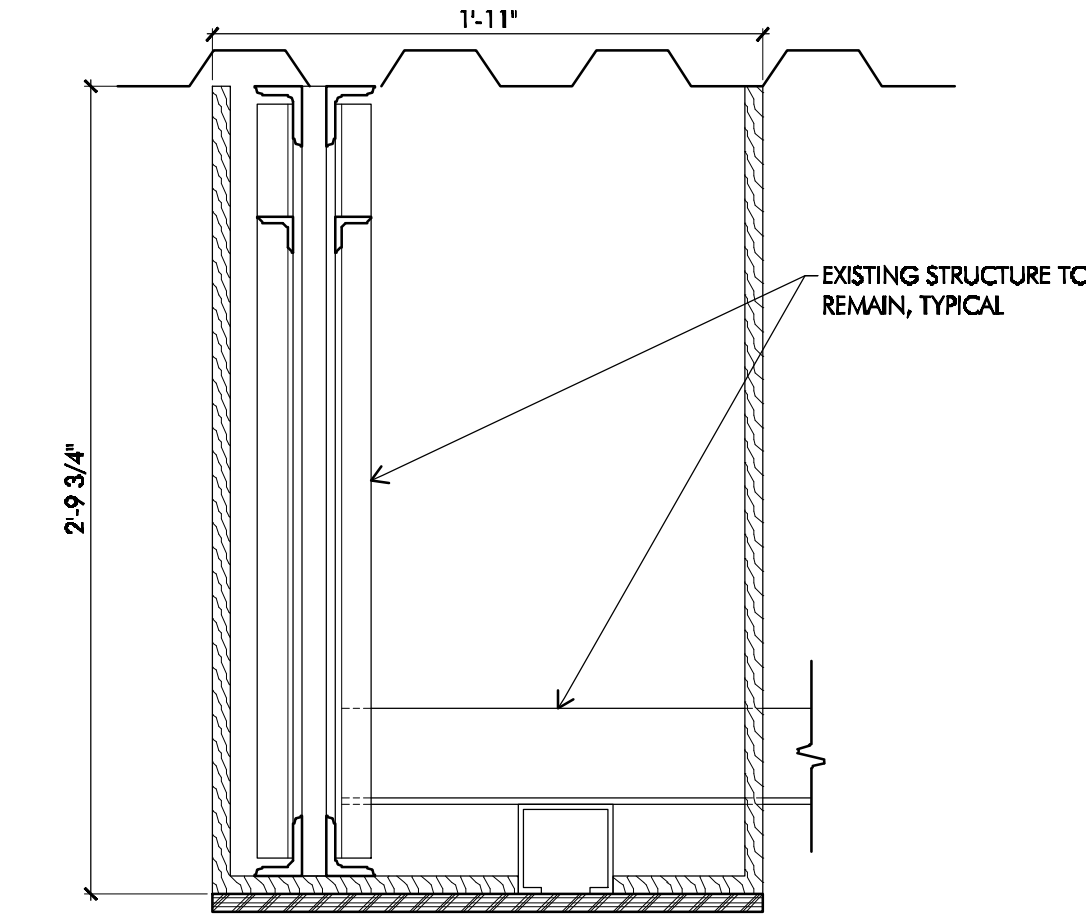
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Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: AS NOTED

A2-02

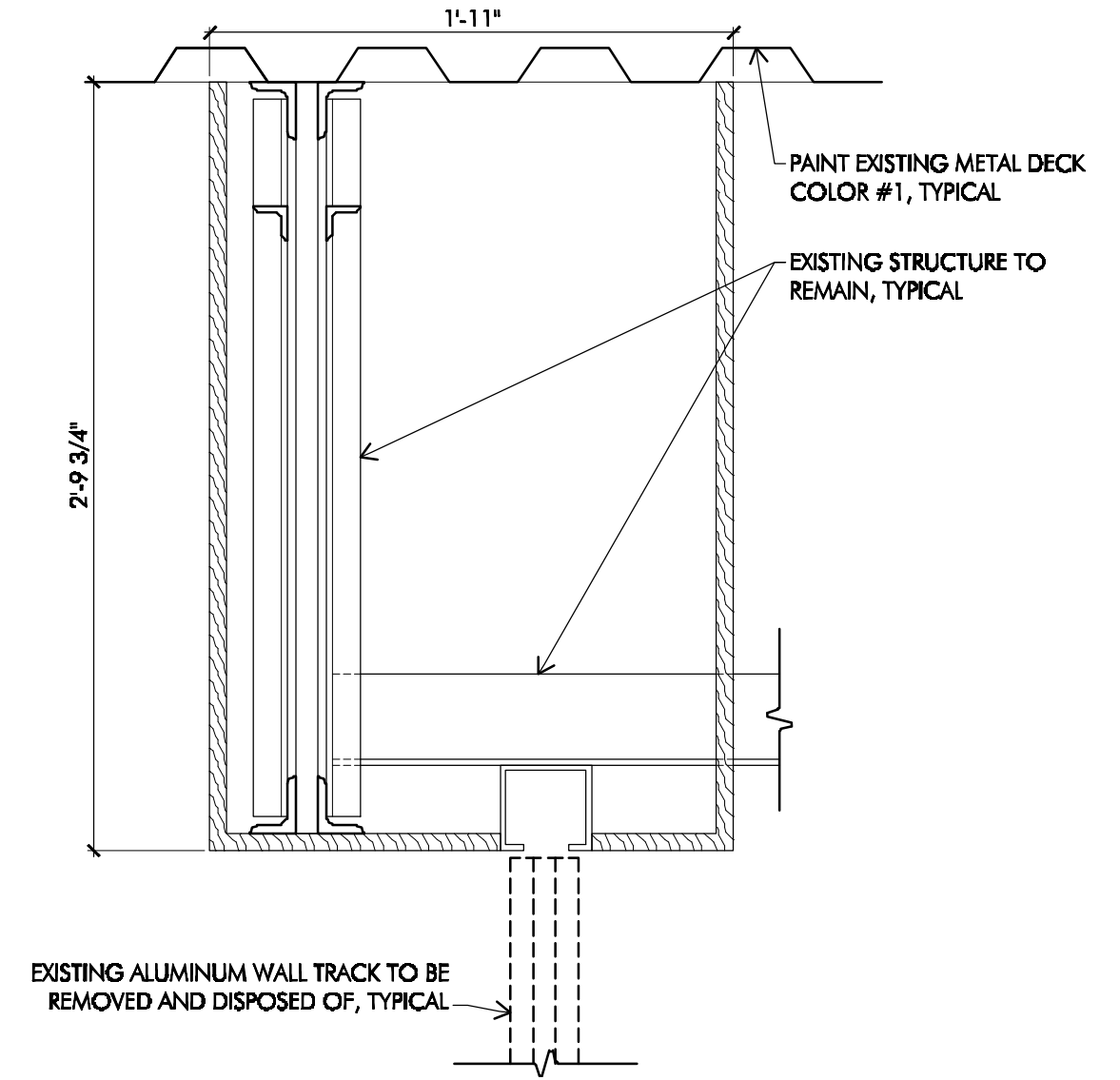


7 TYPICAL DOOR ELEVATION IN LOBBY 126
SCALE: 1/8"=1'-0"

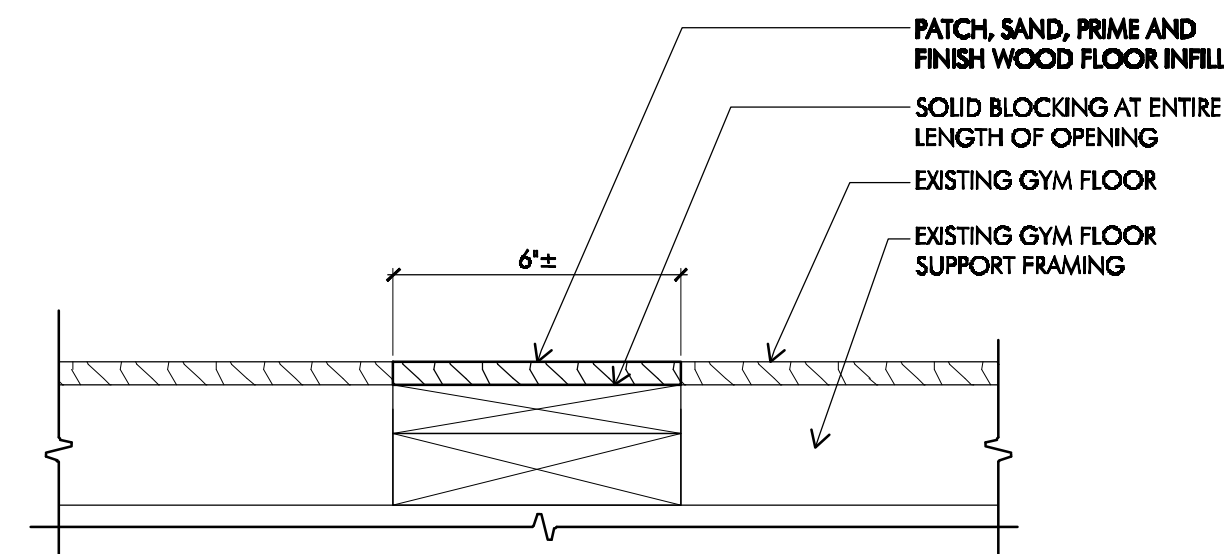
TYPICAL CLEANING NOTE:
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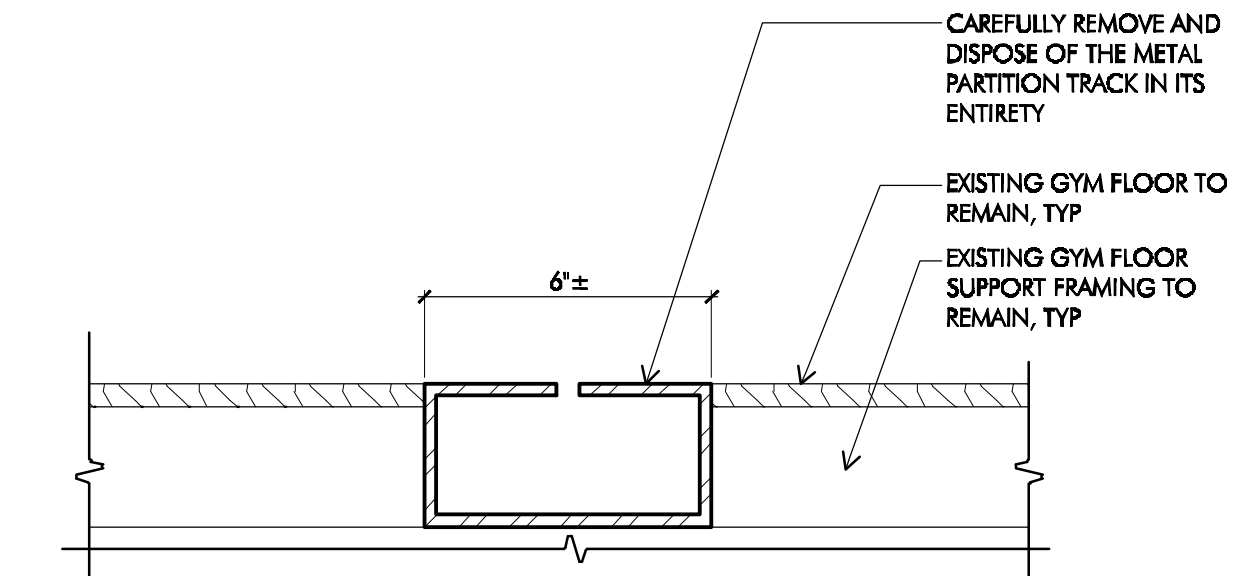
4 TYPICAL MOVABLE GYMNASIUM DIVIDER HEAD DETAIL
SCALE: 1/8"=1'-0"



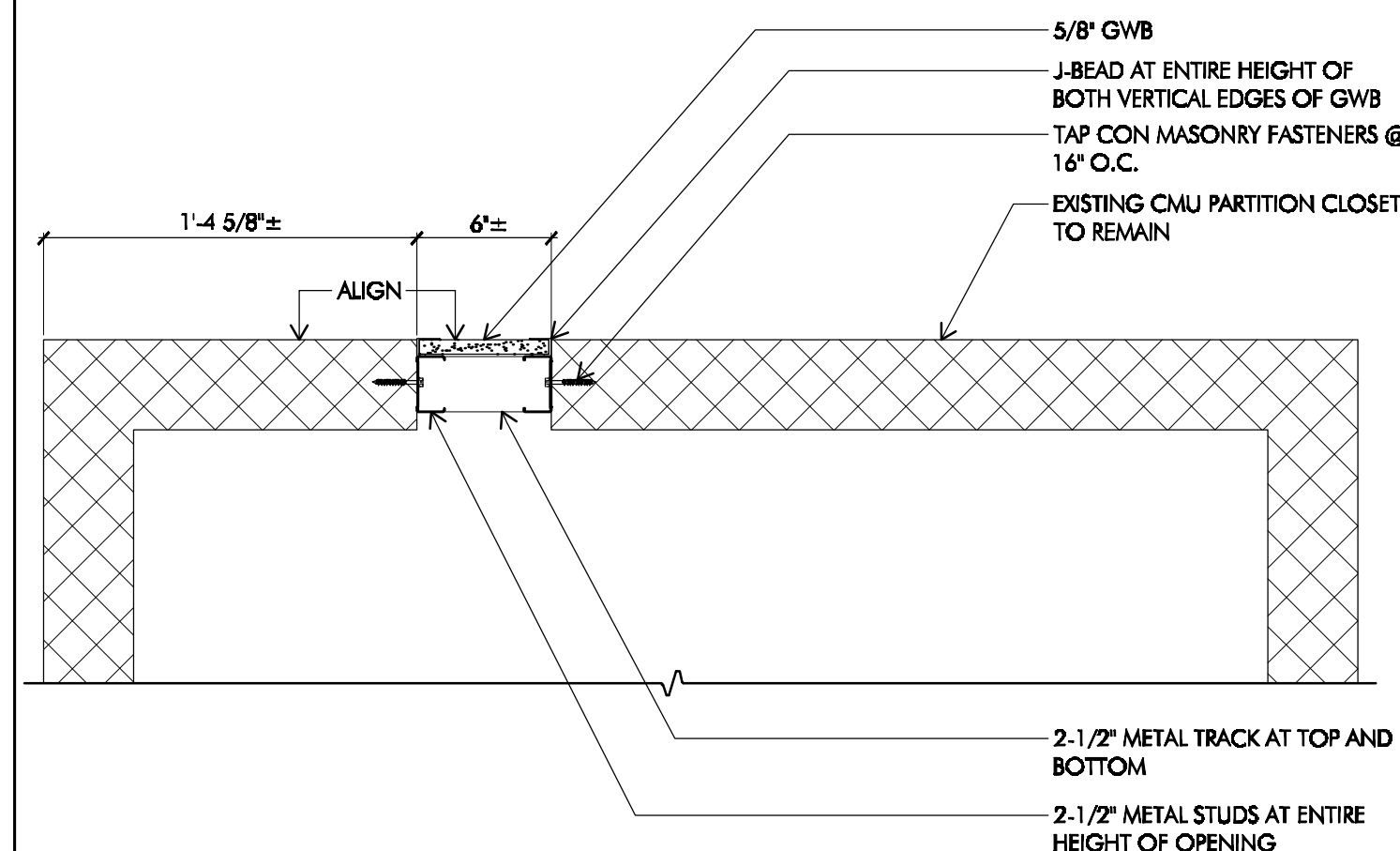
1 EXISTING MOVABLE PARTITION HEAD DETAIL
SCALE: 1/8"=1'-0"



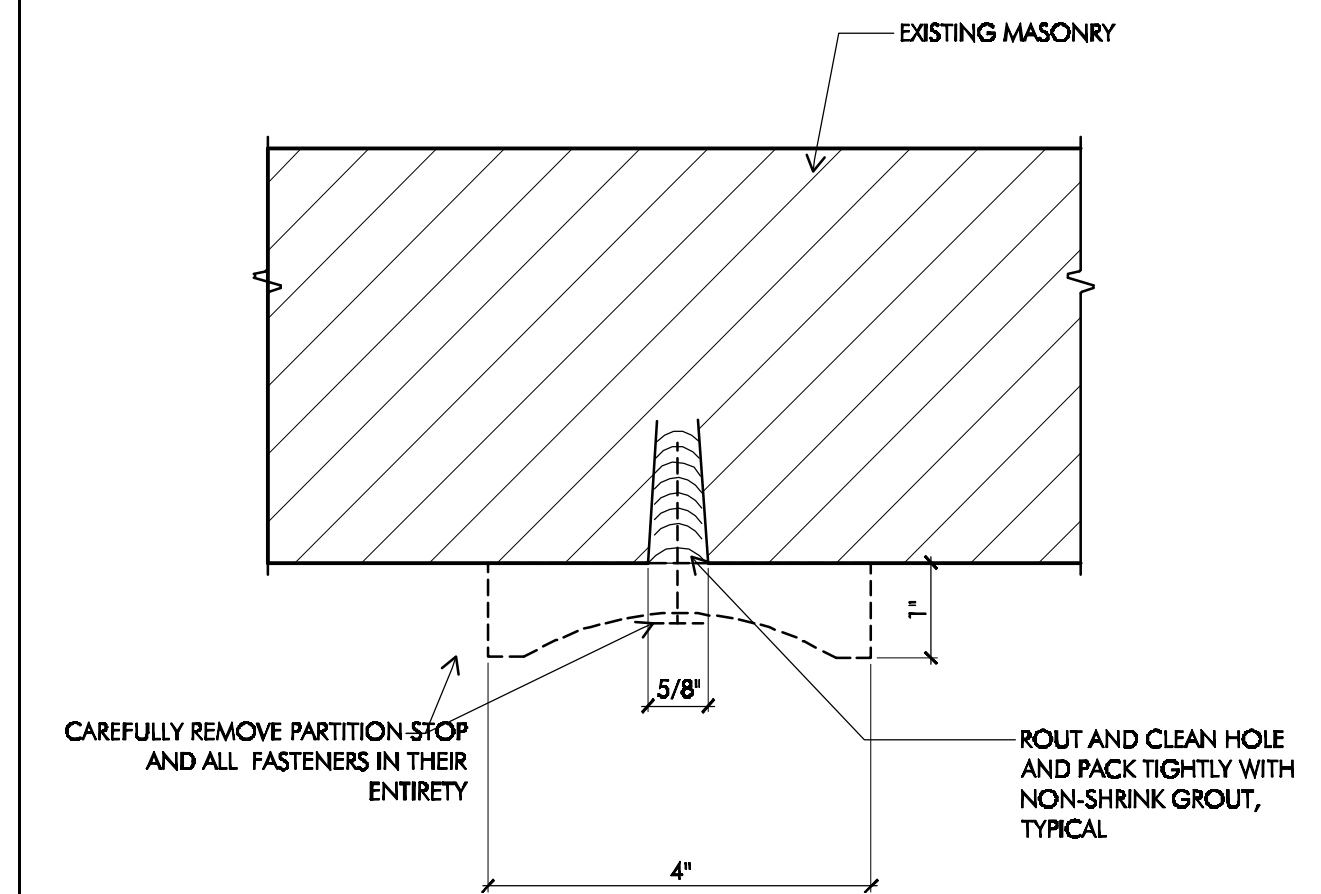
5 TYPICAL MOVABLE GYMNASIUM DIVIDER FLOOR DETAIL
SCALE: 3/4"=1'-0"



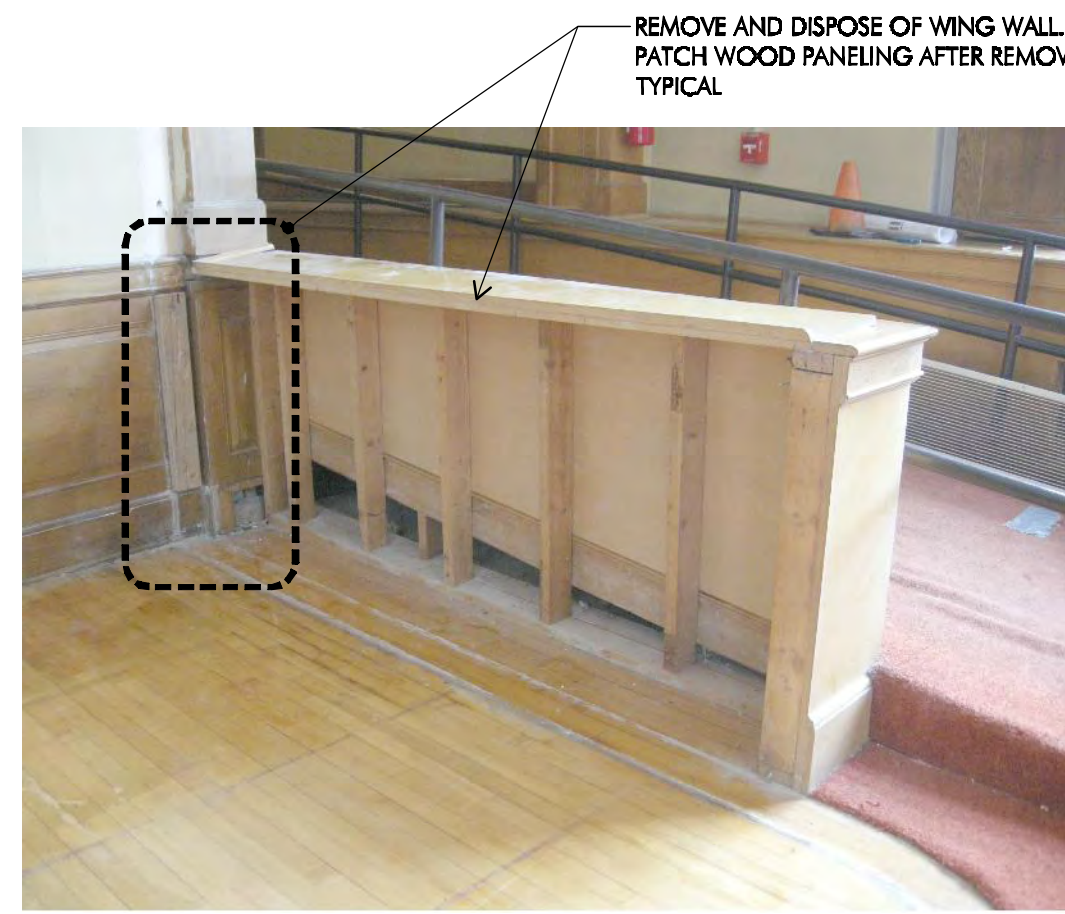
2 EXISTING MOVABLE PARTITION FLOOR DEMOLITION DETAIL
SCALE: 3/4"=1'-0"



6 CLOSET INFILL DETAIL
SCALE: 1/8"=1'-0"

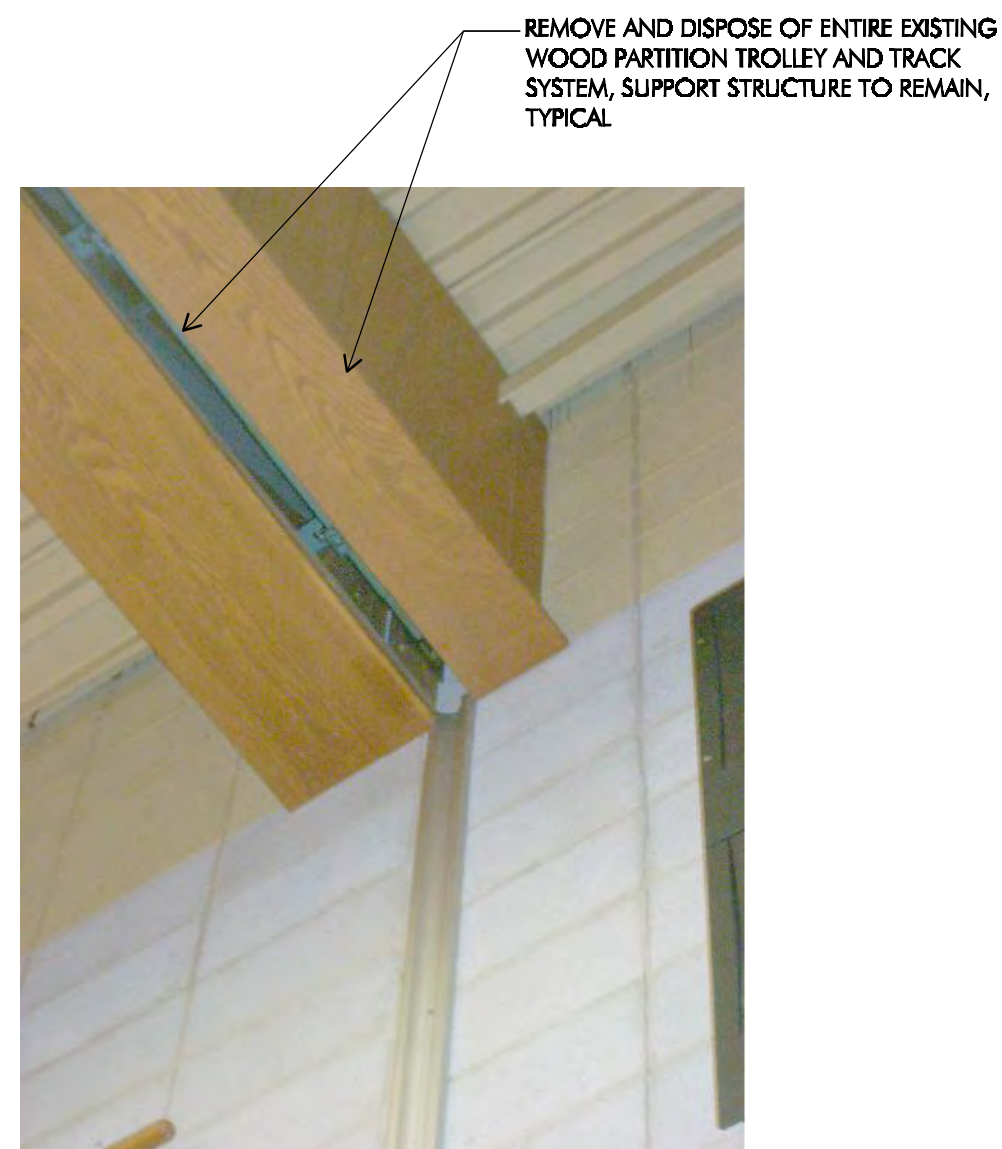


3 TYPICAL CMU PATCH DETAIL
SCALE: N.Y.S.



REMOVE AND DISPOSE OF WING WALL. PATCH WOOD PANELING AFTER REMOVAL, TYPICAL

10 AUDITORIUM WING WALL
SCALE: NTS



REMOVE AND DISPOSE OF ENTIRE EXISTING WOOD PARTITION TROLLEY AND TRACK SYSTEM, SUPPORT STRUCTURE TO REMAIN, TYPICAL

7 GYMNASIUM
SCALE: NTS



REMOVE EXISTING SCOREBOARD

4 GYMNASIUM
SCALE: NTS

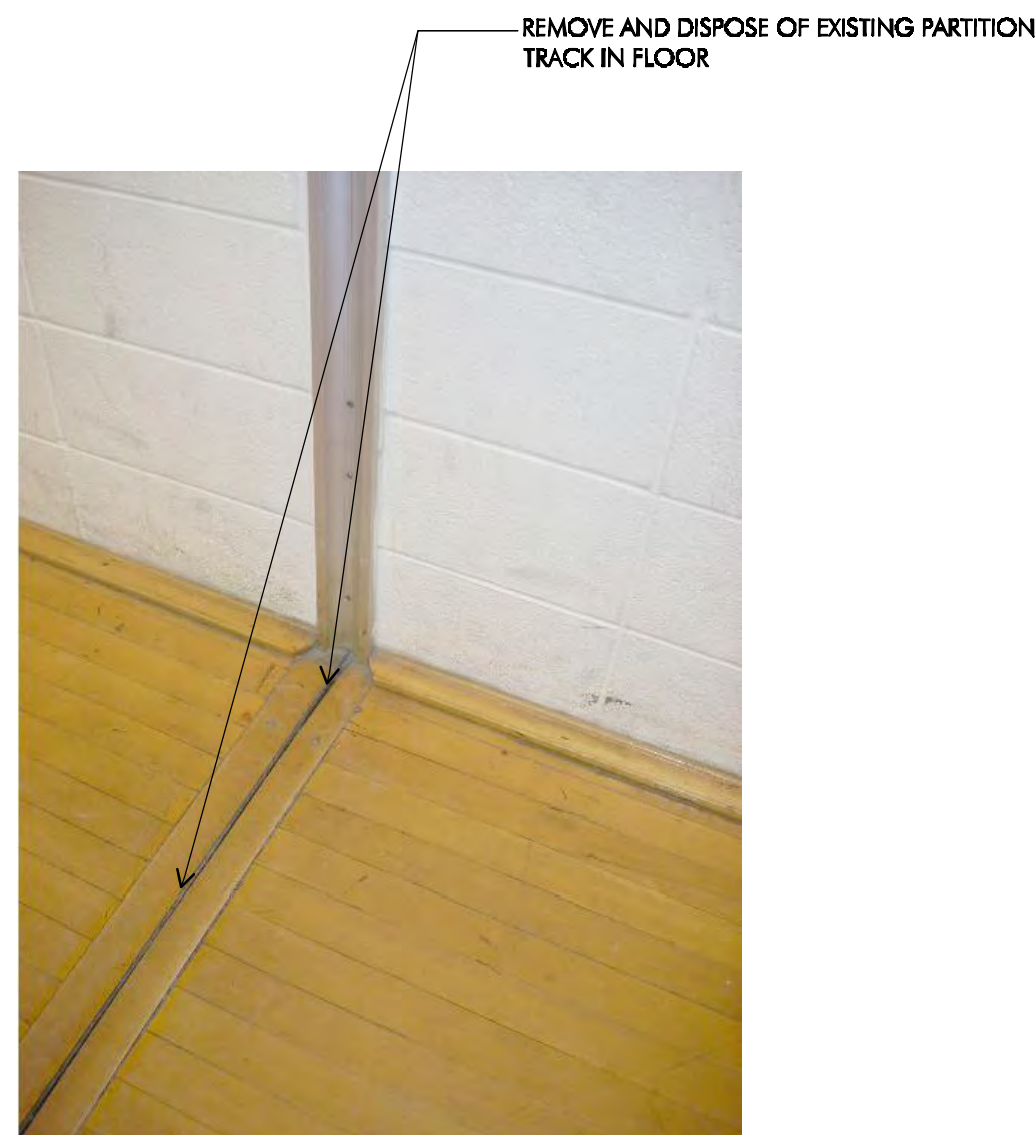


REMOVE EXISTING LIGHTING CONTROLS

1 GYMNASIUM
SCALE: NTS

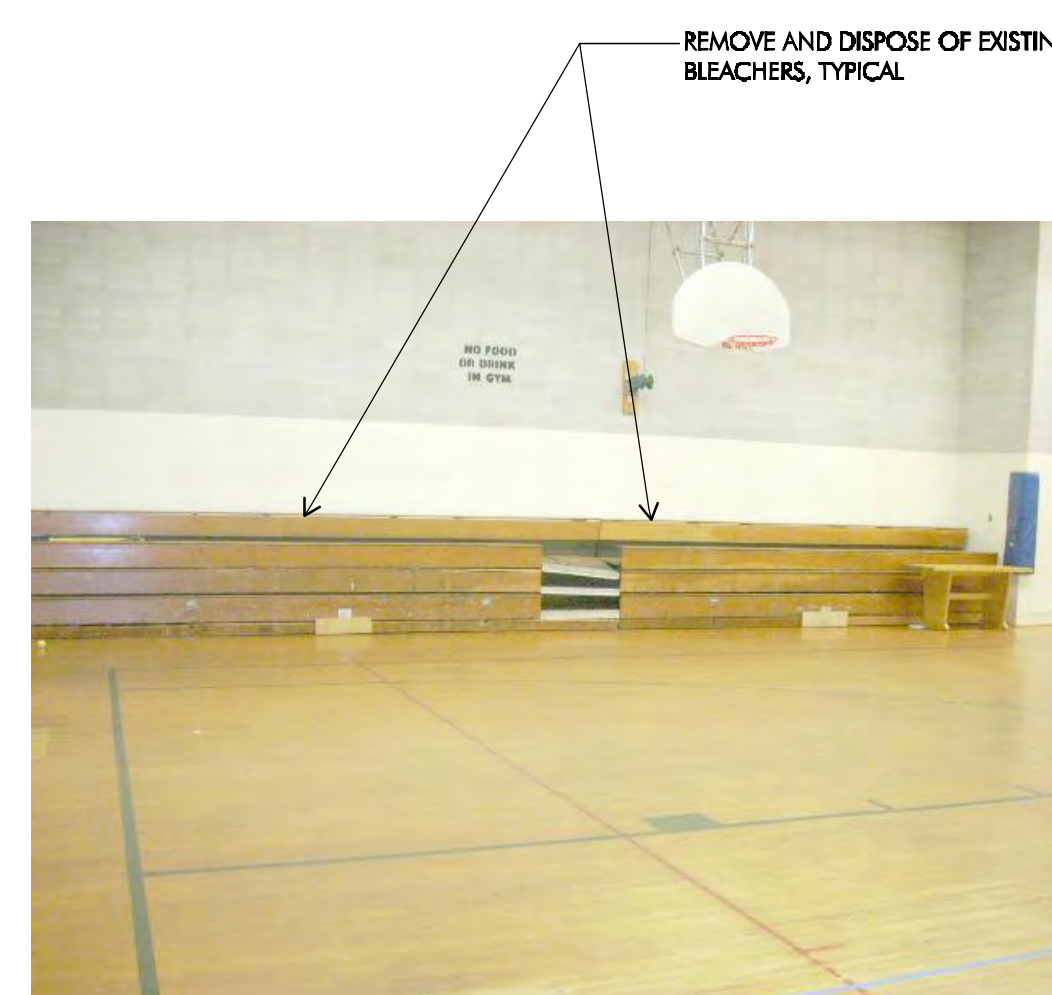


11 PHOTO
SCALE: NTS



REMOVE AND DISPOSE OF EXISTING PARTITION TRACK IN FLOOR

8 GYMNASIUM
SCALE: NTS



REMOVE AND DISPOSE OF EXISTING WOOD BLEACHERS, TYPICAL

5 GYMNASIUM
SCALE: NTS



REMOVE AND DISPOSE OF EXISTING LIGHTING CONTROLS

2 GYMNASIUM
SCALE: NTS



12 PHOTO
SCALE: NTS



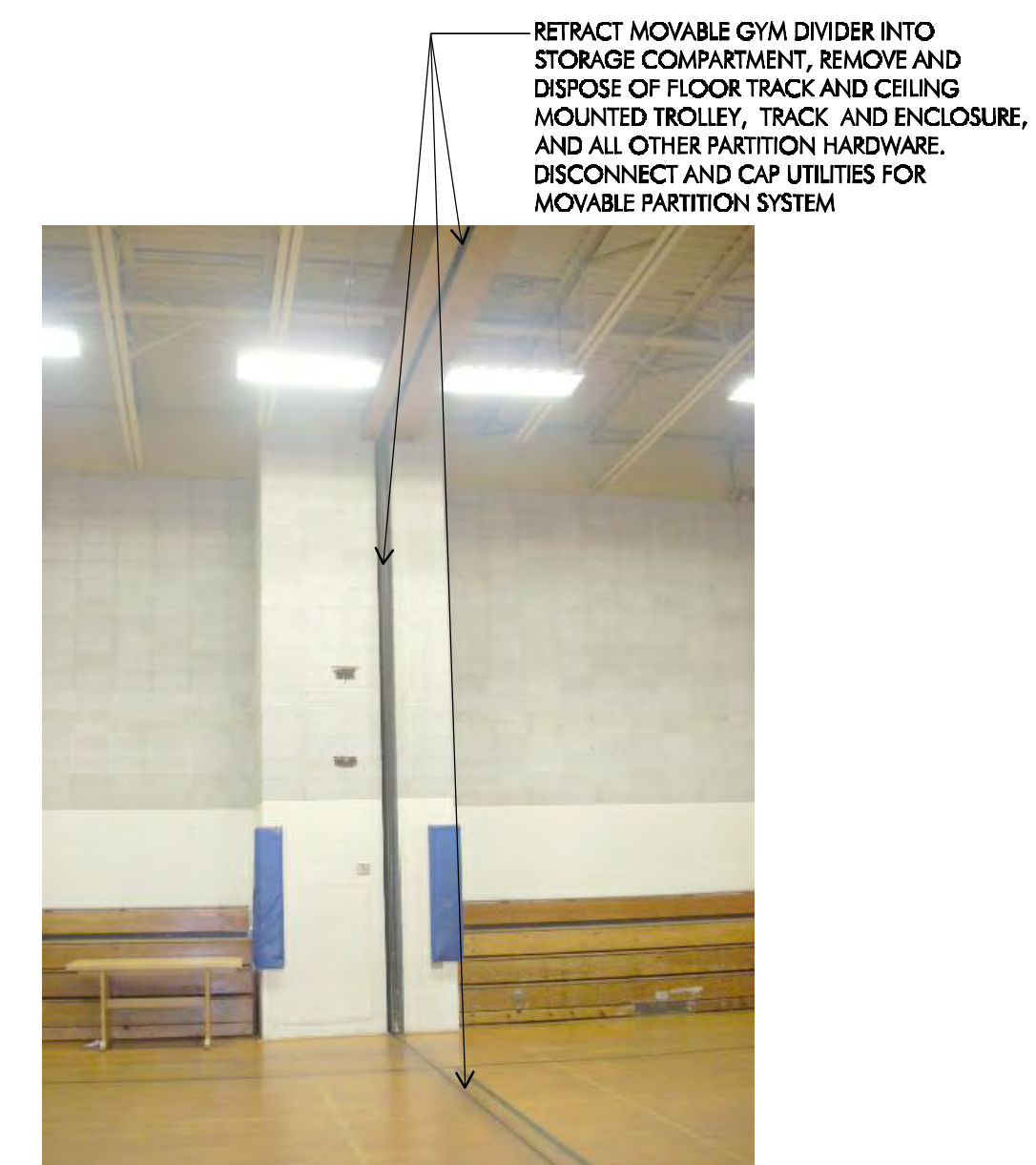
9 TYPICAL RADIATOR COVER
SCALE: NTS



CLEAN WOOD DOORS AND IWOOD TRIM. PAINT WALLS COLOR #4.

SCRAPE AND PAINT STEEL RAILING #8, TYPICAL

6 AUDITORIUM DOOR RAMP INTERFACE
SCALE: NTS



RETRACT MOVABLE GYM DIVIDER INTO STORAGE COMPARTMENT, REMOVE AND DISPOSE OF FLOOR TRACK AND CEILING MOUNTED TROLLEY, TRACK AND ENCLOSURE, AND ALL OTHER PARTITION HARDWARE. DISCONNECT AND CAP UTILITIES FOR MOVABLE PARTITION SYSTEM

3 GYMNASIUM
SCALE: NTS

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Drawing Title:

PHOTOS

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Scale: AS NOTED

A4-01

**AUDITORIUM AND
GYMNASIUM
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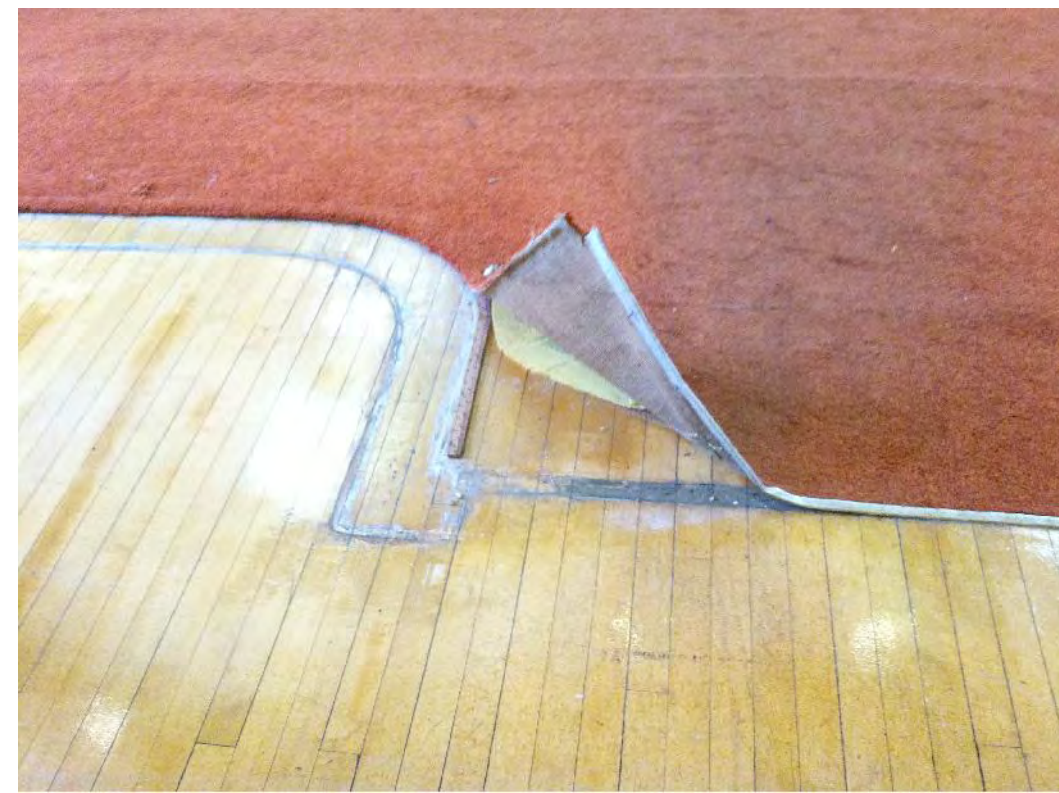
PHOTOS

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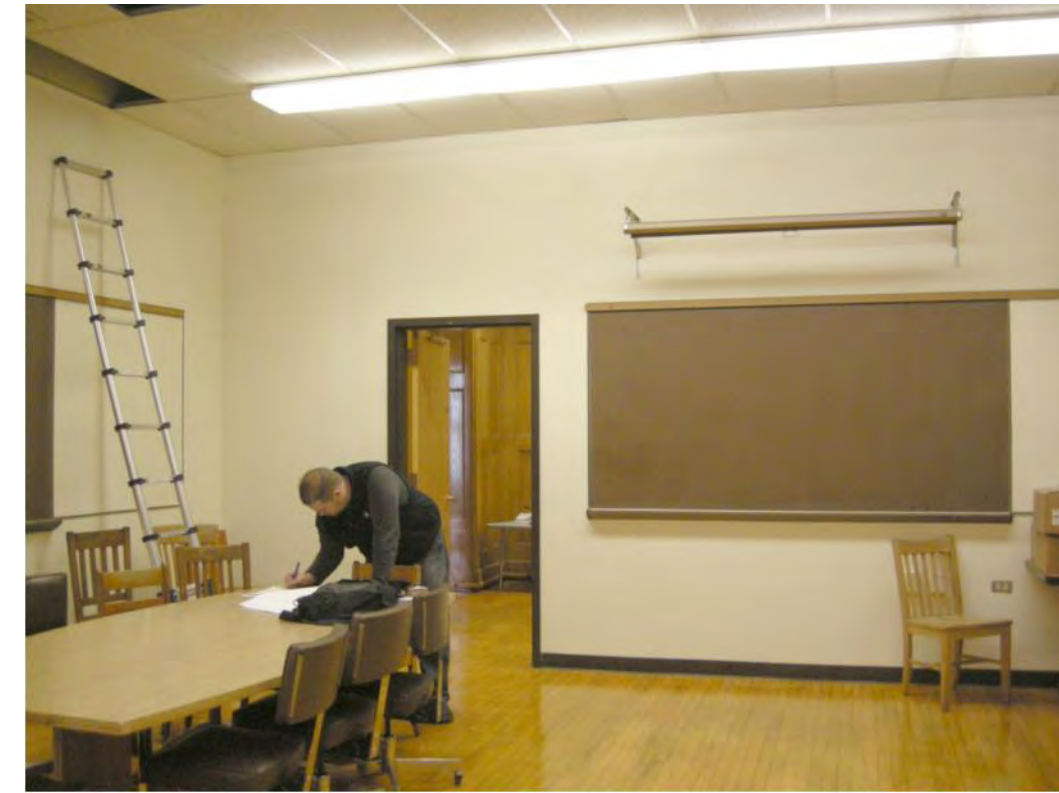
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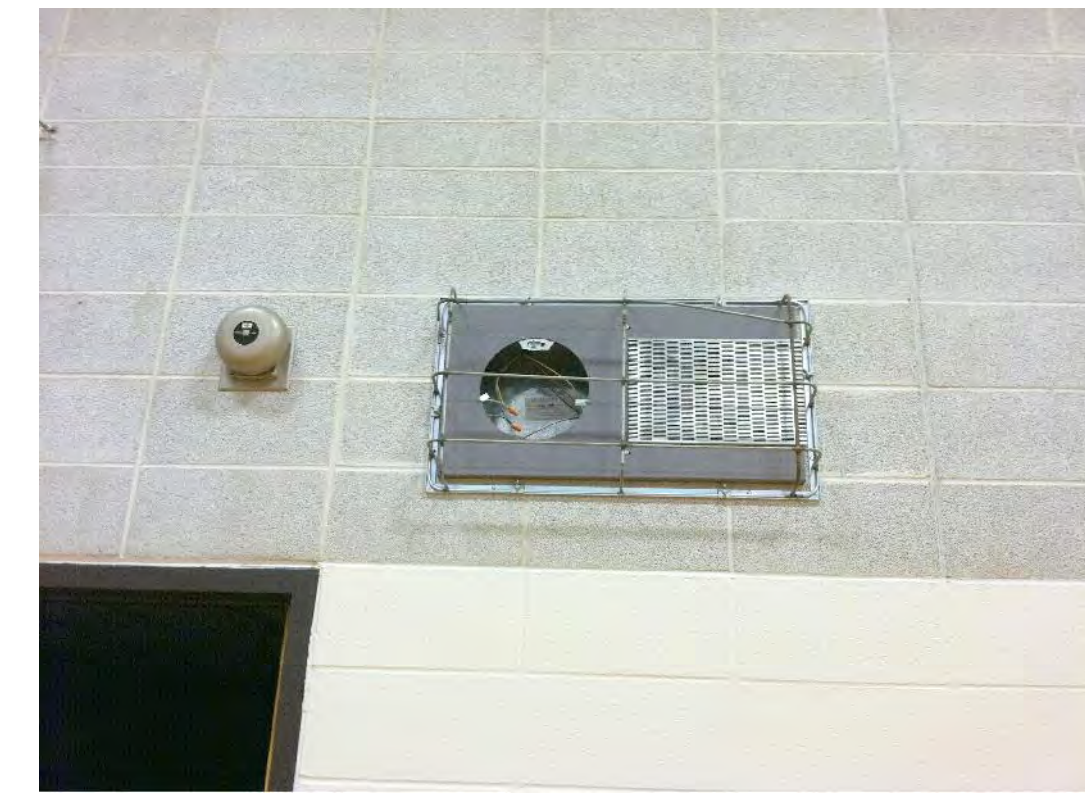
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7 PHOTO
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4 PHOTO
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1 PHOTO
SCALE: NTS



11 PHOTO
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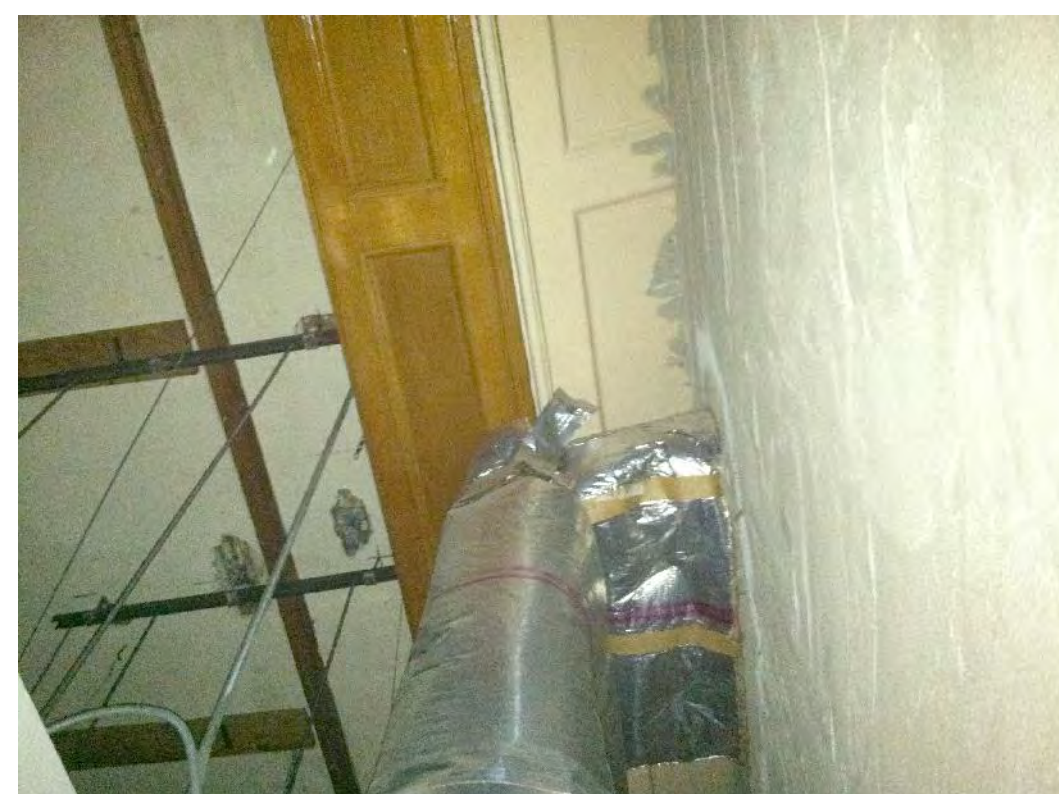
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5 PHOTO
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2 PHOTO
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12 PHOTO
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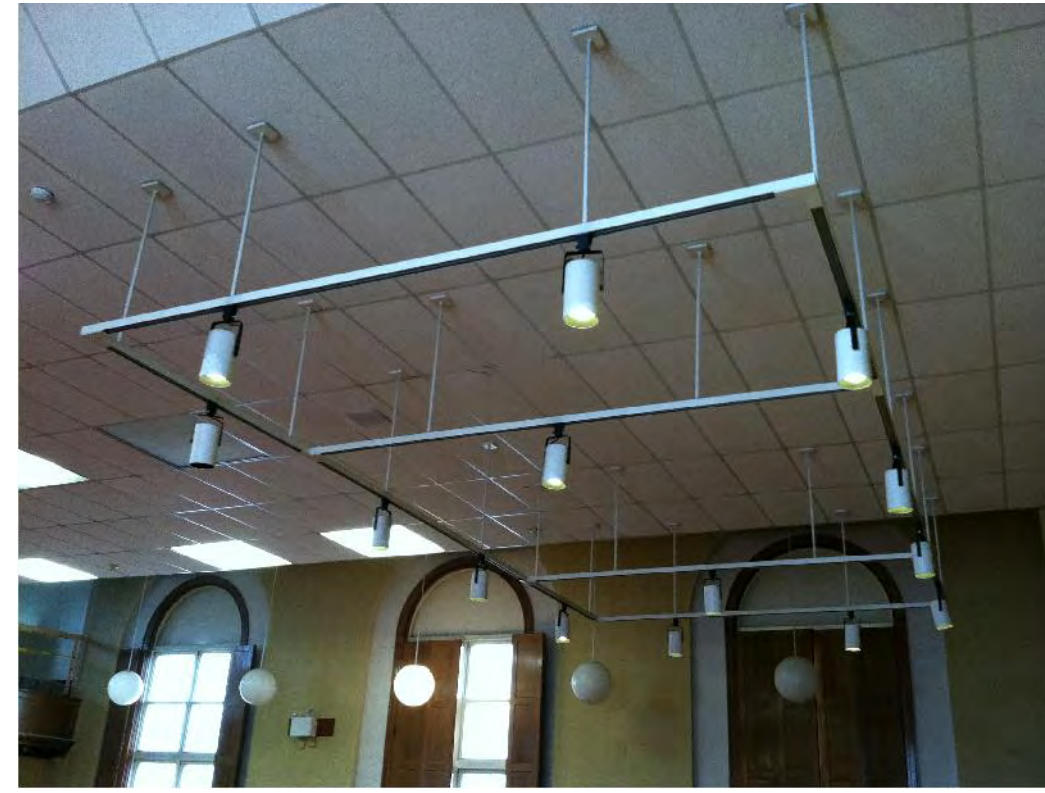
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6 PHOTO
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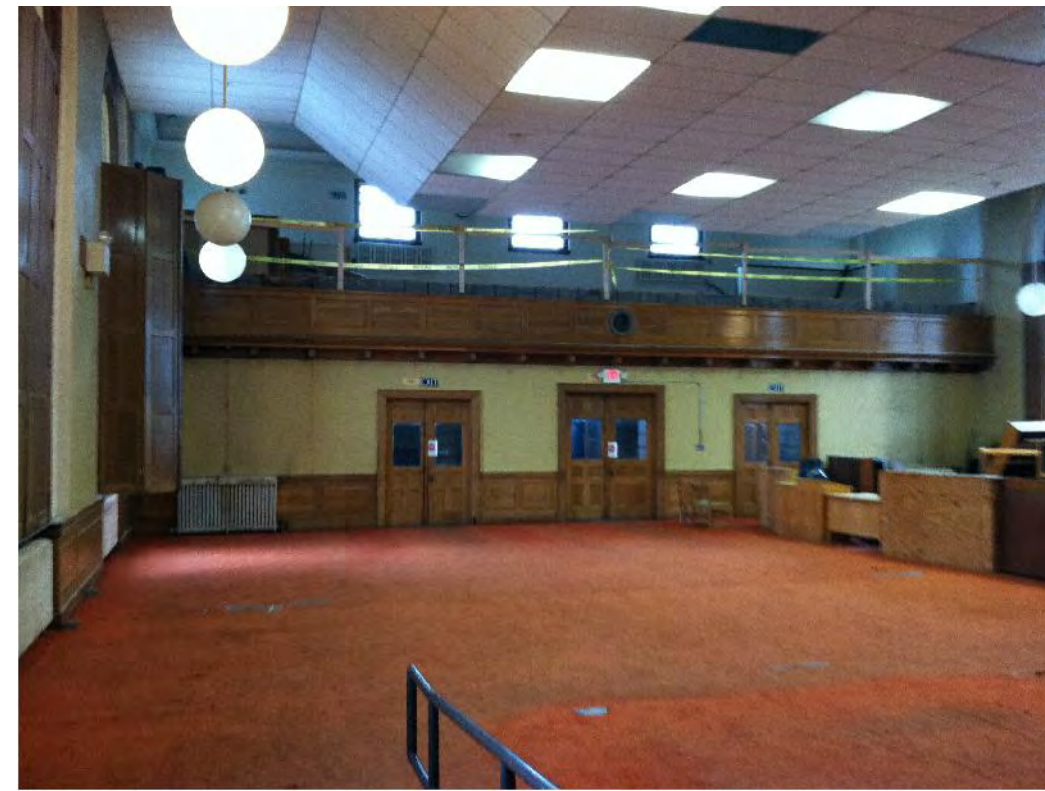
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4 PHOTO
SCALE: NTS



1 PHOTO
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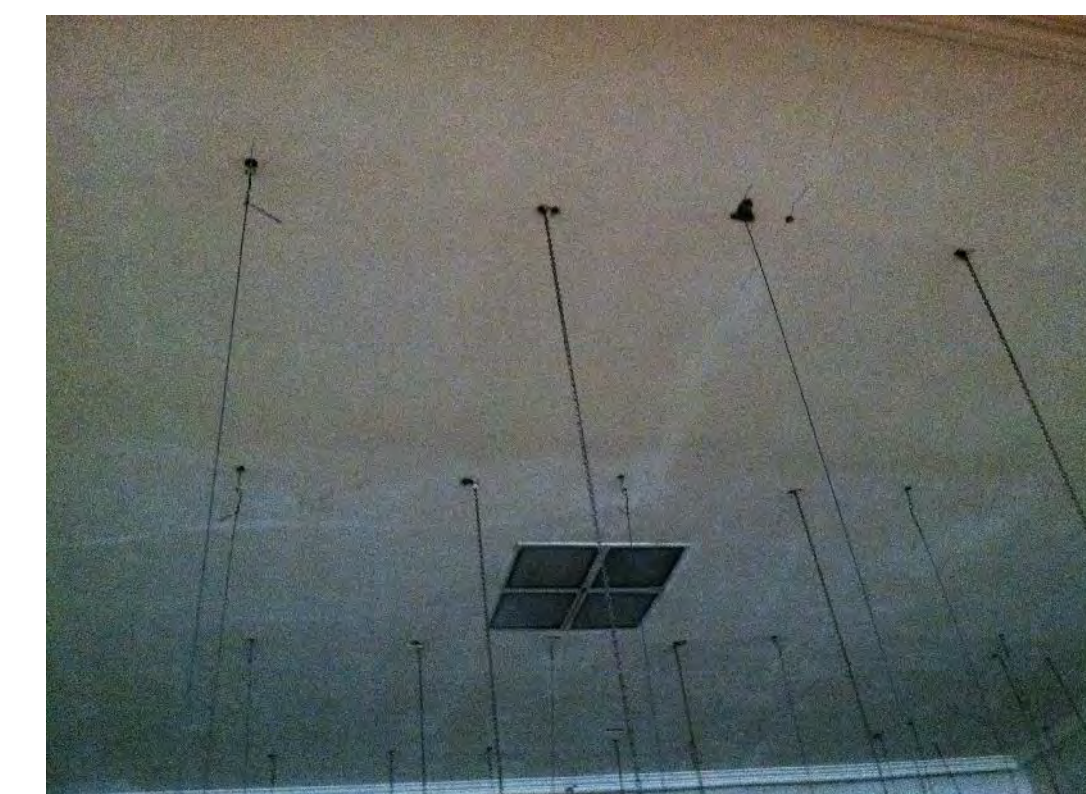
5 PHOTO
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2 PHOTO
SCALE: NTS



6 PHOTO
SCALE: NTS



3 PHOTO
SCALE: NTS



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Scale: AS NOTED

A4-03

GENERAL SPECIFICATIONS

- CONDITIONS OF THE CONTRACT AND DIVISION 1, GENERAL REQUIREMENTS APPLY TO WORK SHOWN ON THESE DRAWINGS. EXAMINE DRAWINGS AND OTHER SPECIFICATIONS FOR REQUIREMENTS THAT AFFECT WORK SHOWN ON THESE DRAWINGS.
- PRODUCE ITEMS REFERRED TO IN SINGULAR NUMBER IN CONTRACT DOCUMENTS IN QUANTITIES NECESSARY TO COMPLETE WORK.
- VISIT SITE AND EXAMINE CONDITIONS UNDER WHICH WORK MUST BE PERFORMED. REPORT ADVERSE CONDITIONS IN WRITING TO ARCHITECT. COMMENCEMENT OF WORK SHALL BE CONSTRUED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS INCLUDING PREPARATORY WORK DONE BY OTHERS.
- PERFORM WORK AND PROVIDE MATERIALS AND EQUIPMENT AS SHOWN ON DRAWINGS. COORDINATE ELECTRICAL WORK WITH WORK SHOWN ON THESE DRAWINGS.
- GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION.
- PERFORM WORK AS REQUIRED BY CODES, REGULATIONS AND LAWS OF LOCAL, STATE AND FEDERAL GOVERNMENTS AND OTHER AUTHORITIES WITH LAWFUL JURISDICTION.
- MATERIAL AND EQUIPMENT SHALL BE UL, NEMA, ANSI, IEEE, ADA & CBM APPROVED FOR INTENDED SERVICE. MATERIAL AND INSTALLATION SHALL MEET REQUIREMENTS OF NATIONAL AND STATE ELECTRICAL CODE.
- MAINTAIN RECORD DRAWINGS ON SITE. RECORD SET MUST BE COMPLETE, CURRENT AND AVAILABLE FOR INSPECTION WHEN REQUESTIONS FOR PAYMENT ARE SUBMITTED.
- GUARANTEE WORK IN WRITING FOR ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS OR INSTALLATION AT NO COST TO OWNER. CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO COST TO OWNER.
- SUBMIT GUARANTEE TO ARCHITECT BEFORE FINAL PAYMENT.
- STATEMENT OF GUARANTEE REQUIREMENTS SHALL NOT BE INTERPRETED TO LIMIT OWNER'S RIGHTS UNDER LAW AND THIS CONTRACT.
- UTILIZE MOLDED CASE CIRCUIT BREAKERS. MINIMUM INTERRUPTING CAPACITY SHALL BE 10,000 AMPS SYMMETRICAL AT 240 VOLTS.
- TEMPORARY LIGHT AND POWER SHALL BE PROVIDED ON SITE BY THE ELECTRICAL CONTRACTOR.
- ADDRESS QUESTIONS REGARDING DRAWINGS TO ARCHITECT IN WRITING BEFORE AWARD OF CONTRACT. OTHERWISE, ARCHITECT INTERPRETATION OF MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.
- SUBMIT SHOP DRAWINGS AND PRODUCT DATA WITHIN THIRTY (30) DAYS AFTER AWARD OF CONTRACT. CHECK, STAMP AND MARK WITH PROJECT NAMES SUBMITTALS BEFORE TRANSMITTING TO ARCHITECT. INDICATE DEVIATIONS FROM CONTRACT DOCUMENTS. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL EQUIPMENT SHOWN ON THE DRAWINGS. PROVIDE SHOP DRAWINGS ON LIGHTING, CIRCUIT BREAKERS, CONDUIT, LIGHTING CONTROL DEVICES, CABLE AND CONDUCTORS.
- DEVIATION FROM CONTRACT DOCUMENTS, OR PROPOSED SUBSTITUTION OF MATERIALS OR EQUIPMENT FOR THOSE SPECIFIED, SHALL BE REQUESTED IN SEPARATE LETTER, WHETHER DEVIATIONS ARE DUE TO FIELD CONDITIONS, STANDARD SHOP PRACTICE, OR OTHER CAUSE.
- SUBSTITUTIONS FOR SCHEDULED LIGHTING EQUIPMENT WILL BE REJECTED UNLESS SUBSTITUTION SUBMITTAL IS RECEIVED WITHIN TEN (10) DAYS AFTER CONTRACT AWARD.
- SCHEDULE AT LEAST TEN (10) WORKING DAYS, EXCLUSIVE ON TRANSMITTAL TIME FOR SUBMITTAL REVIEW.
- ALL WIRING SHALL BE RUN CONCEALED UNLESS SPECIFIED OTHERWISE.
- ALL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, RECTILINEAR TO BUILDING STRUCTURE.
- ALL RACEWAY RUNNING THROUGH BUILDING EXPANSION JOINTS SHALL BE EQUIPPED WITH EXPANSION FITTINGS.
- CONDUIT HOMERUNS SHOWN ON THE DRAWING WITH MORE THAN THREE (3) CURRENT CARRYING CONDUCTORS ARE SHOWN DIAGRAMMATICALLY. THE CONTRACTOR SHALL NOT INSTALL MORE THAN THREE (3) CURRENT CARRYING CONDUCTORS IN A RACEWAY UNLESS DONE SO STRICTLY BY THE NATIONAL ELECTRICAL CODE AS AMENDED BY THE STATE OF MASSACHUSETTS.
- CONTRACTOR SHALL REVIEW ALL TRADES' CONTRACT DOCUMENTS TO DETERMINE SPECIFIC MOUNTING LOCATIONS FOR ELECTRICAL EQUIPMENT. COORDINATE EXACT MOUNTING LOCATIONS WITH THE ARCHITECT.
- BRANCH CIRCUIT WIRING MAY NOT BE SHOWN GRAPHICALLY ON DRAWINGS AND MAY BE INDICATED BY CIRCUIT NUMBERS BESIDE FIXTURES, DEVICES AND EQUIPMENT. PROVIDE COMPLETE WIRING SYSTEM WHETHER OR NOT INDICATED GRAPHICALLY. PHASE BALANCE ALL PANELBOARDS IN FIELD.
- ALL NEW WIRING SHALL BE TYPE THHN/THWN RATED 75-90°C, 600V, WET-DRY LOCATIONS. MINIMUM BRANCH CIRCUIT WIRING SHALL BE NO. 12 AWG SOLID COPPER. BRANCH CIRCUITS LONGER THAN 75 FEET FOR 120 VOLTS OR 175 FEET FOR 277 VOLTS SHALL BE AT LEAST NO. 10 AWG FROM PANEL TO LAST OUTLET.
- ALL NEW EXPOSED INTERIOR WIRING SHALL BE INSTALLED IN ELECTRIC METALLIC TUBING.
- INTERRUPTIONS TO EXISTING ELECTRIC SERVICES AND SYSTEMS SHALL BE AS SHORT AS POSSIBLE AND AT A TIME AND DURATION APPROVED BY THE ARCHITECT OR OWNER. INCLUDE ALL PREMIUM TIME ASSOCIATED WITH INTERRUPTIONS, TWENTY-FOUR (24) HOUR NOTICE IS REQUIRED.
- ALL GROUNDING SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AS AMENDED BY THE STATE OF MASSACHUSETTS.
- ALL FIREPROOFING FOR ELECTRICAL PENETRATIONS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- BRANCH CIRCUITS THAT PASS THROUGH ALTERED AREAS AND SERVE OTHER AREAS SHALL BE MAINTAINED.
- PROVIDE RE-TYPED IDENTIFICATION DIRECTORY IN PANELBOARDS INDICATING CIRCUIT FUNCTION OR EQUIPMENT SERVED.

GENERAL NOTES

- ALL WIRING SHALL BE RUN CONCEALED UNLESS SPECIFIED OTHERWISE.
- REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHTS AND EXACT LOCATIONS OF ALL DEVICES.
- ALL FLOOR, MASONRY WALLS AND STRUCTURAL CEILING PENETRATIONS SHALL BE SLEEVED.
- PROVIDED FIRE/MOISTURE SEAL FOR WALL, FLOOR OR CEILING PENETRATIONS.
- PLACE ALL CABLE/WIRING IN CONDUIT OR RACEWAY. DO NOT LAY ON, OR SUPPORT CONDUIT FROM SUSPENDED CEILING OR PIPING AND DUCTWORK.
- FLEXIBLE CONDUIT CONNECTIONS SHALL BE A MAXIMUM OF 6'-0".
- CIRCUIT NUMBERS SHOWN ARE DIAGRAMMATIC, ELECTRICAL CONTRACTOR SHALL UTILIZE SPARE CIRCUIT AND PROVIDE CIRCUIT BREAKERS TO MATCH EXISTING. MINIMUM AIC RATING SHALL BE 10,000.
- MC TYPE CONDUCTOR WITH INTEGRAL GROUND WIRE MAY BE UTILIZED FOR POWER AND LIGHTING CIRCUITS. MC CABLE SHALL BE UTILIZED ONLY WHERE COMPLETELY CONCEALED.

ABBREVIATIONS

A/AMP	AMPERE	IMC	INTERMEDIATE METALLIC CONDUIT
AC	ALTERNATING CURRENT	JB	JUNCTION BOX
AF	AMPERE FRAME	KVA	KILOVOLT-AMPERE
AFB	ABOVE FINISHED FLOOR	KW	KILOWATT
AFG	ABOVE FINISHED GRADE	LTG	LIGHTING
AIC	AMPERE INTERRUPTING CAPACITY	PWR	POWER
AL	ALUMINUM	MCS	MAIN CIRCUIT BREAKER
AT	AMPERE TRIP	MEC	MASSACHUSETTS ELECTRICAL CODE
ATS	AUTOMATIC TRANSFER SWITCH	MLO	MAIN LUGS ONLY
AWG	AMERICAN WIRE GAUGE	MTG	MOUNTING
C	CONDUIT	MTD	MOUNTED
CKT	CIRCUIT	MCC	MOTOR CONTROL CENTER
CB	CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL CODE
CU	COPPER	NS	NON-SYSTEM
CL	CENTERLINE	NIS	NOT TO SCALE
DC	DIRECT CURRENT	No. #	NUMBER
DE	DUAL ELEMENT	PC	PLUMBING CONTRACTOR
DWG	DRAWING	RFM	REVOLUTIONS PER MINUTE
EC	ELECTRICAL CONTRACTOR	RMS	ROOT MEAN SQUARE VALUE
EMH	ELECTRICAL MANHOLE	RCS	RIGID STEEL CONDUIT
EW	ELECTRIC WATER COOLER	SF	SQUARE FOOT
EWT	ELECTRIC METALLIC CONDUIT	SN	SOLID NEUTRAL
FLMT	FLEXIBLE LIQUID TIGHT METALLIC TUBING	SWBD	SWITCHBOARD
GC	GENERAL CONTRACTOR	TYP	TYPICAL
GND	GROUND	V	VOLTS
GF	GROUND FAULT INTERRUPTING	VA	VOLT-AMPERE
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	WFD	VARIABLE FREQUENCY DRIVE
HP	HORSEPOWER	WP	WEATHERPROOF

LIGHTING NOTES

- ALL CONDUIT, WIRING AND ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST NATIONAL ELECTRICAL CODE, NATIONAL FIRE PROTECTION ASSOCIATION, AMERICAN'S WITH DISABILITIES ACT (ADA) AND ANY APPLICABLE LOCAL REGULATIONS.
- ALL CONDUIT, FIXTURES AND OUTLETS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED IN THE FIELD, EXCEPT WHERE SPECIFIC DIMENSIONS AND DETAILS ARE SHOWN.
- ALL LIGHTING FIXTURE SPACING DIMENSIONS AND MOUNTING HEIGHTS ARE RECOMMENDED LOCATIONS. SLIGHT VARIATIONS WHERE NECESSARY TO AVOID INTERFERENCE SHALL BE DETERMINED IN THE FIELD.
- THE ELECTRICAL CONTRACTOR SHALL CONSULT AND COOPERATE WITH CONTRACTORS OF OTHER TRADES TO AVOID ANY INTERFERENCE IN THE INSTALLATION OF THEIR RESPECTIVE EQUIPMENT.
- ALL CONDUIT SHALL BE (EMT). NO CONDUIT SMALLER THAN 3/4 INCH ELECTRICAL TRADE SIZE SHALL BE USED, UNLESS SPECIFICALLY CALLED FOR ON THE DRAWINGS, EXCEPT THAT 1/2 INCH CONDUIT MAY BE USED FOR LIGHTING FIXTURE STEMS WHERE APPLICABLE.
- MINIMUM SIZE OF CONDUCTOR SHALL BE #12 AWG UNLESS OTHERWISE NOTED.
- MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:
 - LIGHT SWITCHES, 4'-0" FROM FLOOR TO CENTERLINE.
 - LIGHTING PANELBOARDS, 6'-0" FROM FLOOR TO TOP.
 - LIGHT FIXTURES - SEE LIGHTING FIXTURE SCHEDULE, MOUNTING HEIGHT OF FIXTURE IS MEASURED TO BOTTOM OF REFLECTOR.
- WHERE REQUIRED, ADDITIONAL SUPPORT STEEL FOR THE LIGHTING INSTALLATION SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. SEISMIC RESTRAINTS SHALL BE INCLUDED AS PER MASSACHUSETTS STATE BUILDING CODE.
- ALL EXISTING FIXTURES TO REMAIN SHALL BE CLEANED AND RELAMPED.
- PROVIDE SEPARATE UN-SWITCHED NEUTRAL TO ALL EMERGENCY LIGHT FIXTURES CONTAINING EMERGENCY BALLASTS.
- FOR RENOVATION PROJECTS, PROVIDE NEW BRANCH CIRCUITRY BETWEEN ALL NEW FIXTURES BEING PROVIDED, UNLESS NOTED OTHERWISE ON DRAWINGS.
- VISIT SITE AND EXAMINE CONDITIONS UNDER WHICH WORK MUST BE PERFORMED. COMMENCEMENT OF WORK SHALL BE CONSTRUED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS INCLUDING PREPARATORY WORK DONE BY OTHERS.
- PERFORM WORK AND PROVIDE MATERIALS AND EQUIPMENT TO MAKE INSTALLATION COMPLETE IN EVERY DETAIL UNDER THIS CONTRACT WHETHER OR NOT SPECIFICALLY SHOWN ON DRAWINGS.
- MATERIAL AND EQUIPMENT SHALL BE UNDERWRITER LABORATORIES LISTED FOR INTENDED SERVICE. MATERIALS AND INSTALLATION SHALL MEET REQUIREMENTS OF STATE ELECTRICAL CODE.

DEMOLITION NOTES

- REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FULL EXTENT OF THE SCOPE OF DEMOLITION. DISCONNECT AND MAKE SAFE ALL ELECTRICAL EQUIPMENT IDENTIFIED FOR REMOVAL ON THE ELECTRICAL PLANS. THE ELECTRICAL SCOPE MAY EXTEND BEYOND THE AREA DEFINED BY THE ARCHITECTURAL DEMOLITION LIMITS TO FULLY COMPLY WITH VARIOUS REQUIREMENTS DEFINED BY THESE NOTES.
- THE ELECTRICAL DEMOLITION PLANS AND DETAILS INDICATE THE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL ITEMS TO BE REMOVED OR RETAINED. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO THE SUBMISSION OF BIDS TO BECOME FAMILIAR WITH THE ACTUAL CONDITIONS AND EXTENT OF WORK. DEVICES AND EQUIPMENT LOCATED ON WALLS AND/OR CEILINGS TO BE REMOVED SHALL BE DISCONNECTED AND MADE SAFE. THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY UNANTICIPATED HIDDEN CONDITIONS ENCOUNTERED DURING DEMOLITION.
- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL SYSTEMS OR BUILDING COMPONENTS DAMAGED DURING THE EXECUTION OF THE WORK. DAMAGE SHALL INCLUDE BUT NOT BE LIMITED TO DESTRUCTION OR DISPOSAL OF ITEMS INTENDED TO REMAIN OR TO BE SALVAGED.
- THE ELECTRICAL CONTRACTOR SHALL CIRCUIT TRACE AND LABEL ALL EXISTING BRANCH CIRCUITS WITHIN THE AREA OF DEMOLITION SCOPE PRIOR TO DE-ENERGIZING AND DISCONNECTION. ALL CIRCUITS WITHIN PANELBOARDS IDENTIFIED FOR REMOVAL SHALL BE TRACED AND LABELED TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION SCOPE LIMIT IS AFFECTED.
- THE ELECTRICAL CONTRACTOR SHALL IDENTIFY ALL BRANCH CIRCUITS AND SYSTEM COMPONENTS, WHICH ARE TO REMAIN WITHIN THE AREA OF DEMOLITION SCOPE. THERE SHALL BE NO INTERRUPTION OF SERVICE TO ANY AREA OUTSIDE THE SCOPE LIMITS WITHOUT APPROVAL FROM THE OWNER'S REPRESENTATIVE. EXISTING EQUIPMENT TO REMAIN SHALL BE LEFT IN A CODE COMPLIANT MANNER.
- THE ELECTRICAL CONTRACTOR SHALL DE-ENERGIZE AND REMOVE ALL CONDUCTORS AND RACEWAYS TO THEIR POINTS OF ORIGIN WITHIN THE AREA OF DEMOLITION SCOPE. ITEMS IDENTIFIED FOR DEMOLITION SHALL NOT BE ABANDONED IN PLACE. RACEWAYS THAT ENTER MASONRY WALLS AND FLOORS SHALL BE CUT FLUSH AT THE SURFACE FOR PATCHING BY OTHERS. ALL CIRCUIT BREAKERS ASSOCIATED WITH THE DEMOLITION SCOPE SHALL BE DE-ENERGIZED AND LABELED SPARE.
- THE ELECTRICAL CONTRACTOR SHALL TEMPORARILY SUPPORT ALL ITEMS TO REMAIN THAT ARE AFFECTED BY THE DEMOLITION OF BUILDING STRUCTURAL COMPONENTS (WALLS, CEILINGS, ETC.). TEMPORARILY SUPPORTED ITEMS SHALL BE PERMANENTLY SUPPORTED AND INSTALLED WHEN FINALIZED STRUCTURES ARE IN PLACE.
- ALL REMOVED ITEMS SHALL BE LEGALLY DISPOSED OF UNLESS IDENTIFIED FOR REUSE. THE OWNER'S REPRESENTATIVE SHALL INSPECT ALL RETAINED ITEMS PRIOR TO PLACEMENT IN THE IDENTIFIED STORAGE LOCATION BY THE ELECTRICAL CONTRACTOR.
- THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN FULLY FUNCTIONAL DURING THE ENTIRE DEMOLITION AND CONSTRUCTION PERIOD. RELOCATE FIRE ALARM DEVICES AS INDICATED ON PLANS.
- ALL DEMOLITION SCOPE ASSOCIATED WITH LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO TELEPHONE, DATA, SECURITY, PAGING, CCTV, ETC. SHALL BE INCLUDED IN THIS CONTRACT.
- REMOVED FLUORESCENT AND HID LAMPS AND BATTERIES SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE. A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PREPARED FOR ALL DISPOSALS AND RETURNED WITH ALL APPLICABLE SIGN OFF'S PRIOR TO APPLICATION FOR FINAL PAYMENT.
- ALL BALLAST IN LIGHTING FIXTURES TO BE DISPOSED SHALL BE VERIFIED TO BE PCB FREE. ALL BALLAST MANUFACTURED PRIOR TO 1979 AND NOT LABELED AS PCB FREE SHALL BE CONSIDERED TO CONTAIN PCBs. PROVIDE WRITTEN VERIFICATION TO THE OWNER'S REPRESENTATIVE THAT CONFIRMS PCB FREE WASTE. WHERE PCB FREE WASTE CANNOT BE VERIFIED, BALLAST SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE, WITH PCB COMPONENTS ELIMINATED BY A HIGH TEMPERATURE INCINERATION. A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PREPARED FOR ALL DISPOSALS AND RETURNED WITH ALL APPLICABLE SIGN OFF'S PRIOR TO APPLICATION FOR FINAL PAYMENT. ALL HANDLING SHALL CONFORM TO EPA REQUIREMENTS. PROVIDE BREAKOUT COST FOR THIS SCOPE.

EXISTING EQUIPMENT DESIGNATIONS

- | | |
|----|--|
| X | EXISTING TO BE REMOVED. REMOVE ALL ASSOCIATED CONDUIT AND CONDUCTORS. |
| XM | EXISTING TO REMAIN. |
| XN | EXISTING EQUIPMENT TO BE REPLACED WITH NEW. CONNECT NEW EQUIPMENT TO EXISTING CIRCUIT. |
| XR | EXISTING EQUIPMENT TO BE RELOCATED. JUNCTION AND EXTEND EXISTING CONDUIT AND CONDUCTORS. |
| XL | NEW LOCATION FOR EXISTING EQUIPMENT. JUNCTION AND EXTEND CONDUIT AND CONDUCTORS AS REQUIRED. |

LIGHTING FIXTURE SYMBOLS

- | | |
|--|---|
| | FLUORESCENT LIGHTING FIXTURE, RECESSED OR PENDANT MOUNTED. "A" DENOTES LIGHTING FIXTURE TYPE (SEE FIXTURE SCHEDULE), "2" DENOTES CIRCUIT NUMBER, "o" DENOTES SWITCH CONTROL. |
| | FLUORESCENT COVE LIGHTING FIXTURE, INSTALLED IN COFFER CEILING. "A" DENOTES LIGHTING FIXTURE TYPE (SEE FIXTURE SCHEDULE), "2" DENOTES CIRCUIT NUMBER, "o" DENOTES SWITCH CONTROL. |
| | LIGHT FIXTURE, CEILING/SURFACE/ OR PENDANT MOUNTED. "B" DENOTES LIGHTING FIXTURE TYPE, "A" DENOTES CIRCUIT NUMBER, "o" DENOTES SWITCH CONTROL. |
| | EMERGENCY BATTERY UNIT WITH TWO (2) HEADS |
| | EXIT SIGN, SHADED REGION INDICATES FACE |

SWITCHING SYMBOLS

- | | |
|--|---|
| | SINGLE POLE SWITCH, RATED 20A, 120/277V, MOUNTING HEIGHT 48" TO CENTERLINE OF TOGGLE SWITCH IN "ON" POSITION, "o" DENOTES FIXTURE SWITCH CONTROL. |
| | THREE WAY SWITCH, RATED 20A, 120/277V, MOUNTING HEIGHT 48" TO CENTERLINE OF TOGGLE SWITCH IN "ON" POSITION, "o" DENOTES FIXTURE SWITCH CONTROL. |
| | KEY-LOCK SWITCH |
| | FLUORESCENT DIMMER SWITCH |

OCCUPANCY SENSORS

- | | |
|--|---|
| | FIXTURE MOUNTED, HIGH-BAY, LINE VOLTAGE OCCUPANCY SENSOR, 360° TWO-SIDED, 700SF COVERAGE (30' DIAMETER), BY PHILIPS LIGHTING CONTROLS OR EQUAL; PHILIPS LIGHTING CONTROLS No. LRM2330/00 (FOR PARTIAL COVERAGE APPLICATIONS, A PROVIDED MASK CAN BE TRIMMED TO ADJUST COVERAGE) |
| | COVERAGE DIMENSIONS APPLY TO DEVICE BEING CENTERED. ACTUAL COVERAGE'S CAN VARY ON THE SHAPE AND USE OF APPLICABLE SPACE. COVERAGE MAY BE REDUCED IF DEVICE IS MOUNTED GREATER THAN 12 FEET HIGH. |

FIRE ALARM SYSTEM

- | | |
|--|-----------------------|
| | AUDIBLE/VISUAL DEVICE |
| | VISUAL DEVICE |
| | MANUAL PULL STATION |
| | SMOKE DETECTOR |
| | HEAT DETECTOR |

BRANCH CIRCUIT AND FEEDER SYMBOLS

- | | |
|--|--|
| | BRANCH CIRCUIT OR FEEDER CONCEALED UNLESS OTHERWISE NOTED |
| | BRANCH CIRCUIT DIAGONAL LINES INDICATE NUMBER OR CONDUCTORS, NO DIAGONAL LINES INDICATES TWO (2) CONDUCTORS (1 PHASE AND 1 NEUTRAL). GROUND WIRE(S) NOT INDICATED. MINIMUM SIZE CONDUCTOR #12 AWG AND 3/4" CONDUIT, UNLESS OTHERWISE NOTED |
| | INDICATES (3) #1 AWG(PHASE), (1)#1 AWG(NEUTRAL), (1) #6 GROUND IN A 1 1/2" CONDUIT |
| | FLEXIBLE CONNECTION TO MOTOR OR EQUIPMENT |
| | HOMERUN TO PANELBOARD "P1" CIRCUIT NUMBER 1. DIAGONAL LINES INDICATE (1) PHASE AND (1) NEUTRAL CONDUCTOR. (1) GROUNDING CONDUCTOR UNDERSTOOD. |
| | HOMERUN TO PANELBOARD "P1" CIRCUIT NUMBER 1 & 3. DIAGONAL LINES INDICATE (2) PHASE AND (2) NEUTRAL CONDUCTOR. (2) GROUNDING CONDUCTOR UNDERSTOOD. |
| | HOMERUN TO PANELBOARD "P1" CIRCUIT NUMBER 1, 3 & 5. DIAGONAL LINES INDICATE (3) PHASE AND (3) NEUTRAL CONDUCTOR. (3) GROUNDING CONDUCTOR UNDERSTOOD. |
| | HOMERUN TO PANELBOARD "P1" CIRCUIT NUMBER 1, 3 & 5. DIAGONAL LINES INDICATE (3) PHASE AND (1) NEUTRAL CONDUCTOR. (1) GROUNDING CONDUCTOR UNDERSTOOD. |
| | HOMERUN TO PANELBOARD "P1" CIRCUIT NUMBER 1, 3 & 5. DIAGONAL LINES INDICATE (3) PHASE CONDUCTORS. NEUTRAL CONDUCTOR NOT REQUIRED. (1) GROUNDING CONDUCTOR UNDERSTOOD. |

RECEPTACLES AND OUTLETS

- | | |
|--|--|
| | DUPLEX CONVENIENCE RECEPTACLE OUTLET |
| | GROUND FAULT INTERRUPTING 20A, 125V RECEPTACLE |
| | DUPLEX CONVENIENCE OUTLET |
| | GROUND FAULT DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP |
| | JUNCTION BOX |
| | CABLE TELEVISION CONNECTION |
| | TELEPHONE OUTLET. |
| | 2 GANG TELEPHONE/COMPUTER OR DATA OUTLET. |

PANELBOARD AND TERMINAL CABINET

- | | |
|--|----------------------------------|
| | LIGHTING OR POWER PANEL, SURFACE |
|--|----------------------------------|

MISCELLANEOUS

- | | |
|--|--------------|
| | SPEAKER |
| | SYSTEM CLOCK |

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	DESCRIPTION	MANUFACTURER AND CATALOG NUMBER	LAMPS			VOLTAGE
			No.	WATTAGE	TYPE	
A	COVE LIGHT, PROVIDE WITH ADVANCE MARK VII DIMMING BALLAST 3-FT LENGTH	ELLIPTIPAR F306T121S00T	1	21	T5	120
B	COVE LIGHT, PROVIDE WITH ADVANCE MARK VII DIMMING BALLAST 5-FT LENGTH	ELLIPTIPAR F306T135S00T	1	35	T5	120
C	SPOT LIGHT, WHITE LAMP #PAR64MFL, 1000WATT, 800 HR, COLOR TEMP. 3200	SLD LIGHTING #6401 PAR64	1	1000	PAR 64 MED SPOT	120
	EXIT SIGN WITH BATTERY BACKUP, WITH PROTECTIVE WIRE-GUARD	LITHONIA LIGHTING LQMSWR120/277ELNELAWEXT	-	-	LED	120

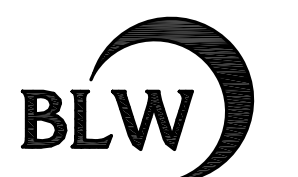


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Drawing Title:

ELECTRICAL LEGEND, NOTES & ABBREVIATIONS

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

E0.1

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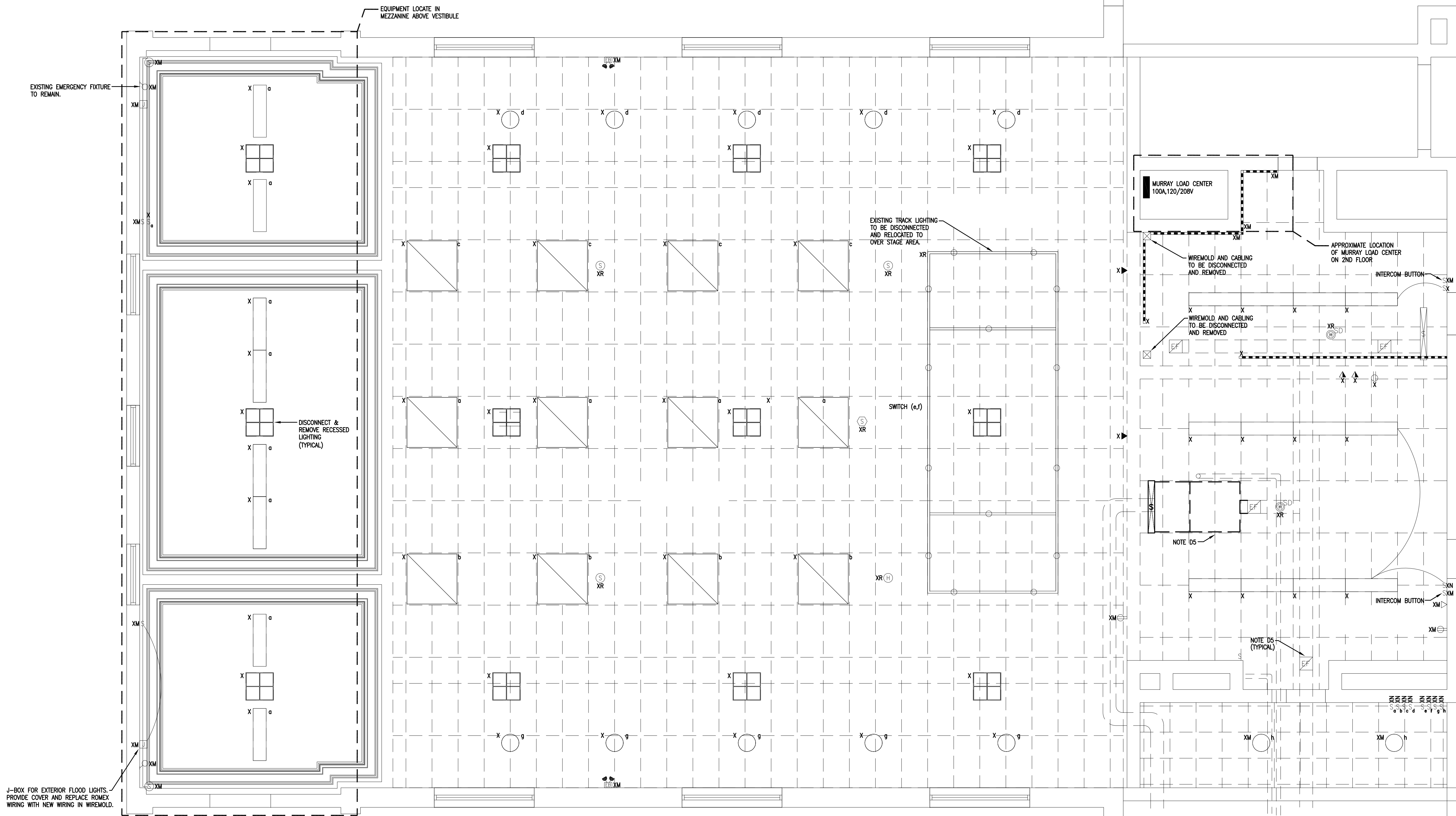
AUDITORIUM ELECTRICAL DEMOLITION PLAN

Revisions:

BID DOCUMENTS

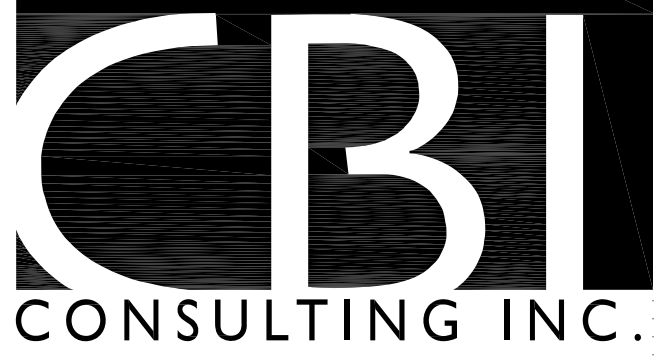
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Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

EI.0



1 ELECTRICAL - Auditorium Electrical Demolition Plan
SCALE: 1/4"= 1'-0"

- DEMOLITION NOTES:**
- D1. DISCONNECT AND REMOVE ALL LIGHTING FIXTURES, APPARATUS'S AND ASSOCIATED BRANCH CIRCUITRY BACK TO SOURCE. EXISTING LIGHTING BRANCH CIRCUITRY ORIGINATES IN THE MURRAY LOAD CENTER (CIRCUITS 1-9) LOCATED IN THE ADJACENT 2ND FLOOR UTILITY CLOSET.
 - D2. EXISTING CEILING MOUNTED FIRE ALARM DEVICES AND AUDIO SPEAKERS SHALL BE DISCONNECTED TEMPORARILY, REMOVED AND RELOCATED AS INDICATED ON NEW WORK PLAN.
 - D3. DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES, APPARATUS'S AND ASSOCIATED BRANCH CIRCUITRY BACK TO SOURCE.
 - D4. DISCONNECT AND REMOVE ALL TELE/DATA DEVICES, APPARATUS'S AND ASSOCIATED CABLING BACK TO SOURCE.
 - D5. EXISTING HVAC UNIT AND EXHAUST FANS TO BE REMOVED BY OTHERS, E.C. SHALL DISCONNECT AND REMOVE ALL ELECTRICAL DISCONNECTS, APPARATUS'S AND ASSOCIATED WIRING BACK TO SOURCE TO MAKE SAFE FOR REMOVAL.



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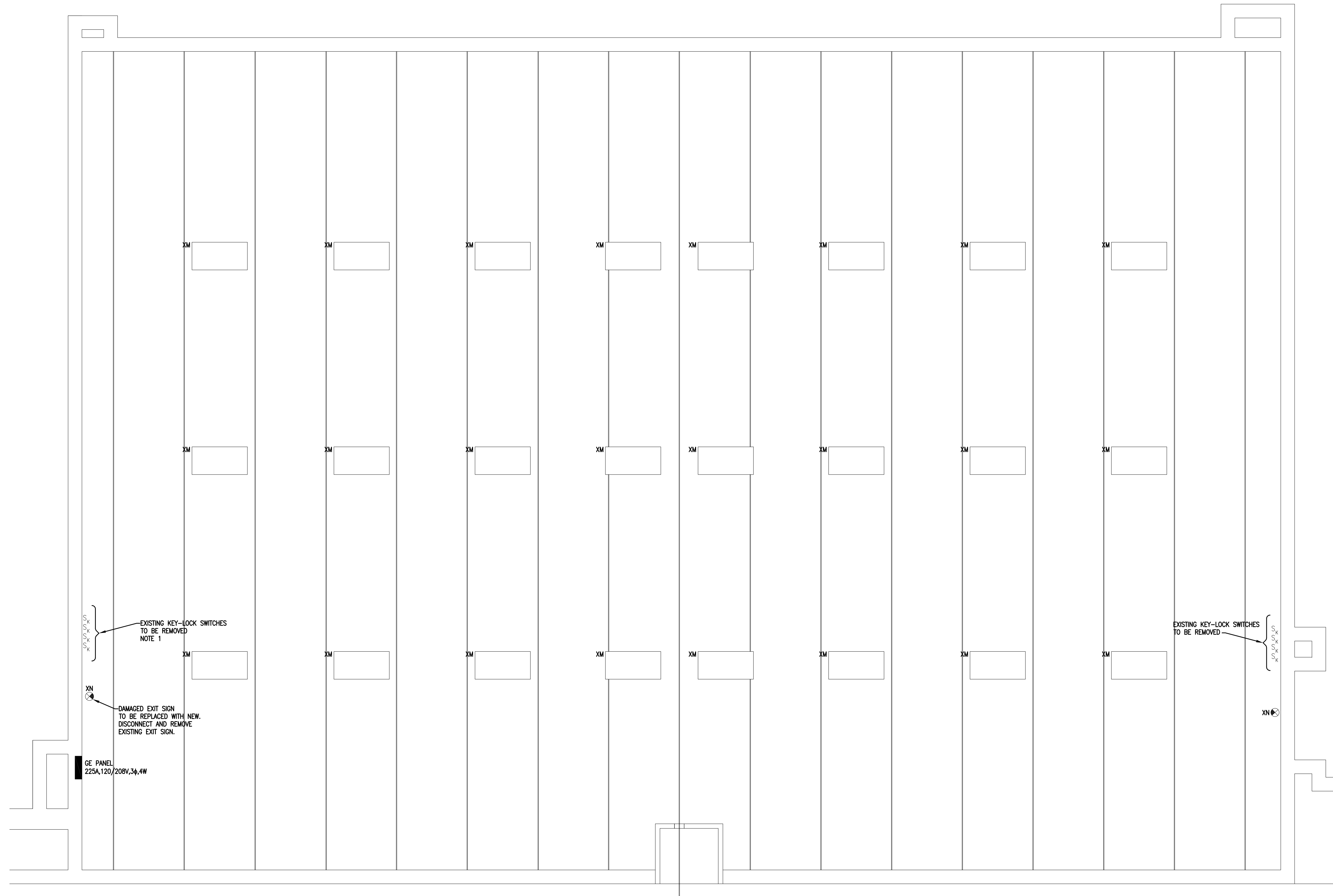
GYMNASIUM ELEC. LIGHTING DEMOLITION PLAN

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

EI.1



1 ELECTRICAL - Gymnasium Lighting Demolition Plan

SCALE: 1/4"=1'-0"

NOTES:

1. DISCONNECT AND REMOVE EXISTING KEY-LOCK SWITCHES AND PROVIDE BLANK COVER PLATE OVER EXISTING SWITCH BACK BOX. EXISTING HIGH-BAY LIGHTING FIXTURE BRANCH CIRCUITRY ORIGINATES FROM EXISTING GE PANEL (CIRCUIT 1).

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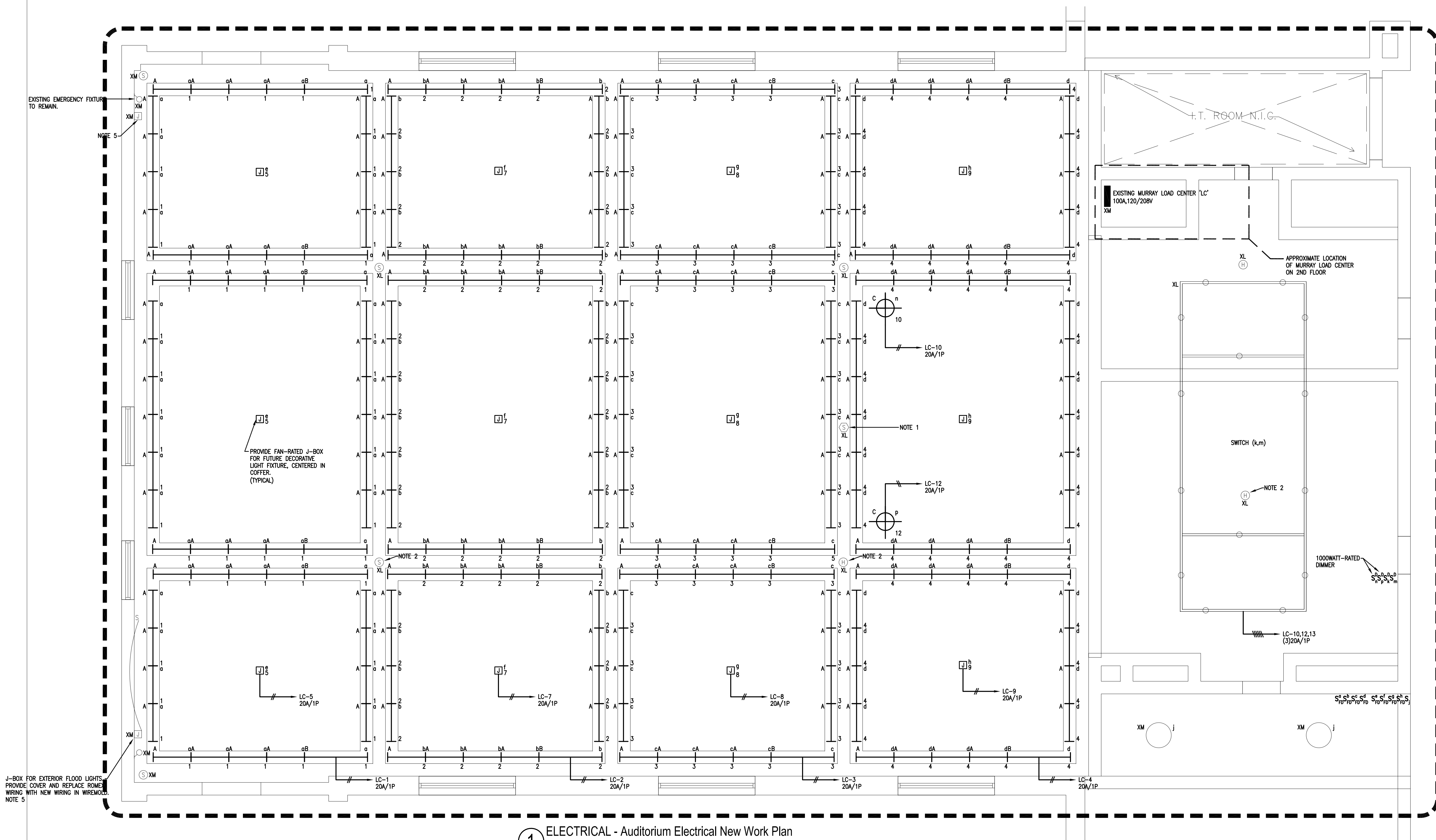
AUDITORIUM ELECTRICAL NEW WORK PLAN

Revisions:

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Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4"=1'-0"

E2.0

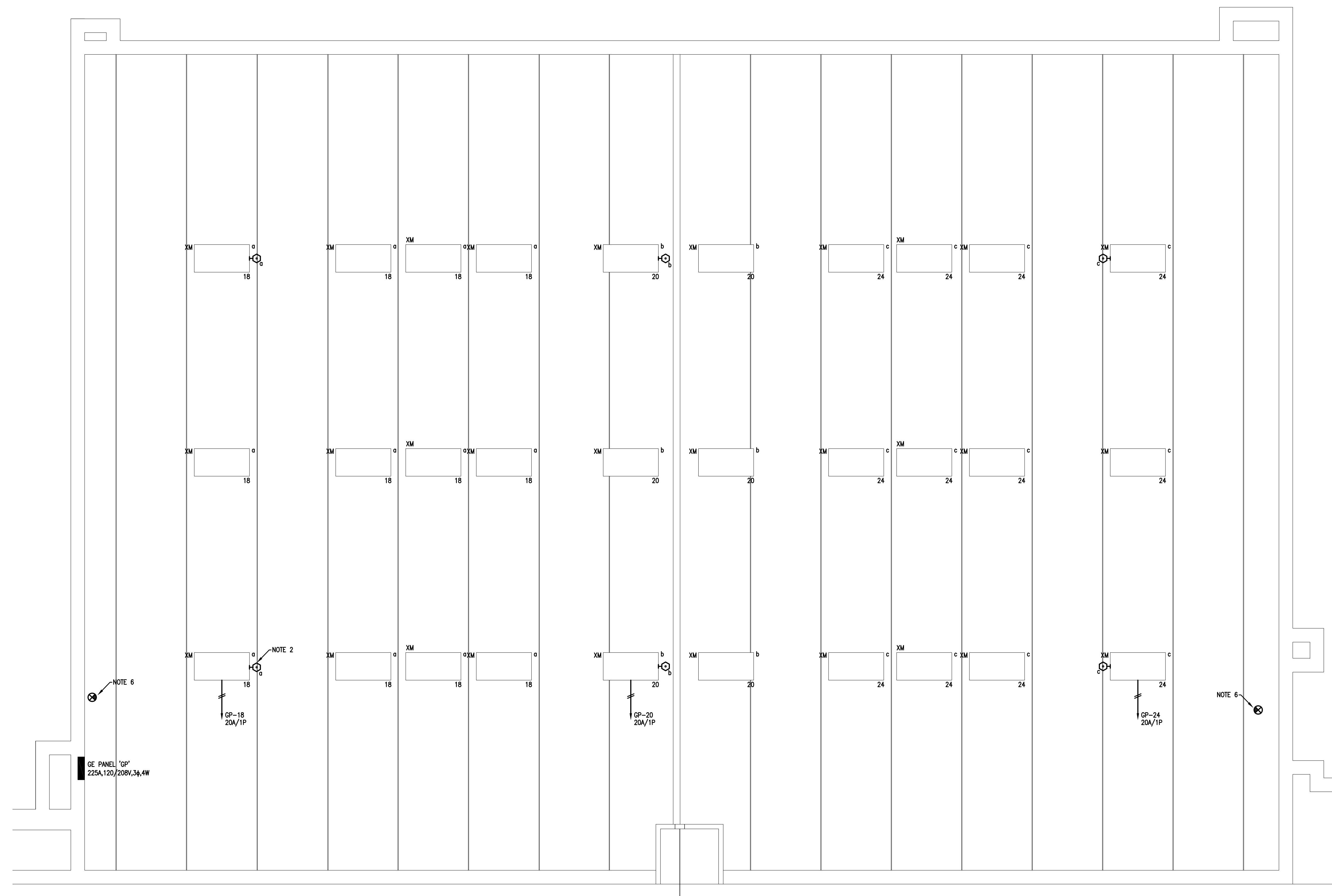


1 ELECTRICAL - Auditorium Electrical New Work Plan
SCALE: 1/4"= 1'-0"

- NOTES:**
1. JUNCTION AND EXTEND SPEAKER CIRCUIT WIRING AS REQUIRED. PROVIDE WIREMOLD BY LEGRAND MODEL NO. 500 & 700 SERIES FOR SURFACE MOUNTED CABLING. PROVIDE ALL LENGTHS AND ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION.
 2. JUNCTION AND EXTEND INITIATION LOOP CIRCUITRY AS REQUIRED. PROVIDE WIREMOLD BY LEGRAND MODEL NO. 500 & 700 SERIES FOR SURFACE MOUNTED CABLING. PROVIDE ALL LENGTHS AND ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION.
 3. PROVIDE NEW LIGHTING BRANCH CIRCUITRY TO COVE LIGHTS. UTILIZE EXISTING CONDUIT AT SWITCH BOX AND RUN CIRCUITRY CONCEALED IN EXISTING PATHWAY. PROVIDE WIREMOLD BY LEGRAND MODEL NO. 500 & 700 SERIES FOR SURFACE MOUNTED CABLING. PROVIDE ALL LENGTHS AND ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION.
 4. UTILIZED EXISTING CIRCUIT BREAKERS IN EXISTING MURRAY PANEL FOR NEW LIGHTING BRANCH CIRCUITRY. PROVIDE ADDITIONAL CIRCUIT BREAKERS TO MATCH EXISTING AS REQUIRED.
 5. PROVIDE NEW WIRING IN WIREMOLD FOR EXISTING EXTERIOR FLOOD LIGHTS. PROVIDE COVER FOR JUNCTION BOX. WIREMOLD SHALL BE BY LEGRAND MODEL NO. 500 & 700 SERIES FOR SURFACE MOUNTED CABLING. PROVIDE ALL LENGTHS AND ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION.

J-BOX FOR EXTERIOR FLOOD LIGHTS. PROVIDE COVER AND REPLACE ROME WIRING WITH NEW WIRING IN WIREMOLD. NOTE 5

PROVIDE FAN-RATED J-BOX FOR FUTURE DECORATIVE LIGHT FIXTURE, CENTERED IN COFFER. (TYPICAL)



1 ELECTRICAL - Gymnasium Lighting New Work Plan
SCALE: 1/4"= 1'-0"

NOTES:

1. INTERCEPT EXISTING LIGHTING BRANCH CIRCUITRY AND CONNECT TO NEW FIXTURE MOUNTED OCCUPANCY SENSOR. JUNCTION AND EXTEND LIGHTING CIRCUITRY AS REQUIRED.
2. PROVIDE NEW WIRING BETWEEN OCCUPANCY SENSORS AND LIGHTING FIXTURES TO COMPLETE CIRCUITRY.
3. UTILIZE EXISTING LIGHTING BRANCH CIRCUIT BREAKERS. PROVIDE ADDITIONAL CIRCUIT BREAKERS AS REQUIRED TO MATCH EXISTING (SEE TOB CB).
4. RE-WIRE FOR SWITCHING AS INDICATED ON PLAN.
5. ALL EXISTING FIXTURES SHOULD BE CLEANED AND RE-LAMPED.
6. CONNECT TO EXISTING BRANCH CIRCUIT.



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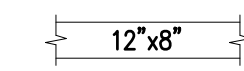
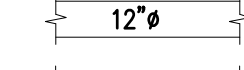

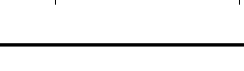
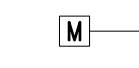
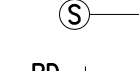

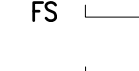




GYMNASIUM
ELEC. LIGHTING
NEW WORK PLAN

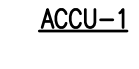
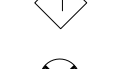
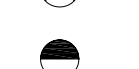

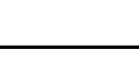
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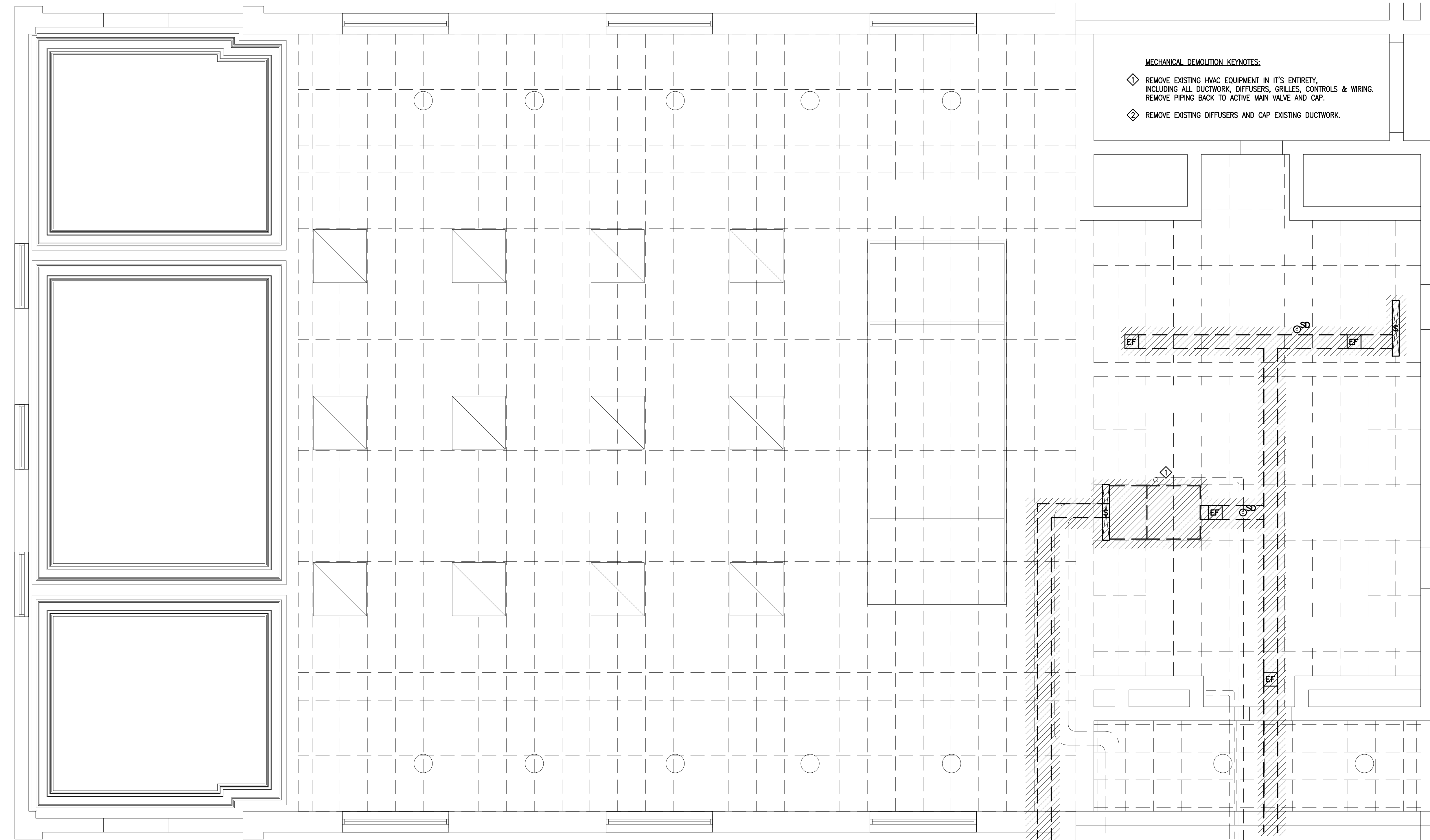
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DUCTWORK LEGEND	
	RECTANGULAR DUCTWORK - FIRST DIMENSION IS SIDE SHOWN (IN.)
	ROUND DUCTWORK - DIMENSION IS DUCT DIAMETER (IN.)
	EXISTING DUCTWORK
	EXISTING DUCTWORK TO BE REMOVED
DAMPERS	
	ACD MOTORIZED OR AUTOMATIC CONTROL DAMPER
	SD SMOKE DAMPER
	BD BACK DRAFT DAMPER
	FD FIRE DAMPER
	FS FIRE & SMOKE DAMPER
	VD VOLUME DAMPER
CONTROL SCHEMATIC LEGEND	
	HEAT/COOL THERMOSTAT
	CONTROL LINE

DRAWING NOTES	
	EQUIPMENT DESIGNATION
	DRAWING WORK NOTE
	CONNECT TO EXISTING
	CAP EXISTING
	LIMIT OF DEMOLITION

DEMOLITION GENERAL NOTES	
1.	CONTRACTOR SHALL VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK OF THIS SECTION. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY CONSTRUED BY EXPERIENCED OBSERVERS.
2.	PRIOR TO COMMENCING WORK OF THIS SECTION, EXAMINE SITE AND CONDITIONS UNDER WHICH WORK WILL BE PERFORMED. DETERMINE EXACT LOCATIONS OF EXISTING EQUIPMENT, PIPING AND CONTROLS. REPORT TO OWNER ANY CONDITIONS THAT MIGHT ADVERSELY AFFECT WORK. COMMENCEMENT OF WORK SHALL BE CONSTRUED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS AND PREPARATORY WORK.
3.	ABANDONING OF DUCTWORK, PIPING OR EQUIPMENT IN PLACE SHALL NOT BE ALLOWED. COMPLETE REMOVAL REQUIRED UNLESS NOTED OTHERWISE.
4.	PIPING TO BE REMOVED: REMOVE PORTION OF PIPING INDICATED TO BE REMOVED AND CAP REMAINING PIPING WITH SAME OR COMPATIBLE PIPING MATERIAL.
5.	DUCTS TO BE REMOVED: REMOVE PORTION OF DUCTS INDICATED TO BE REMOVED AND CAP REMAINING DUCTS WITH SAME OR COMPATIBLE DUCTWORK MATERIAL.
6.	EQUIPMENT TO BE REMOVED: DISCONNECT AND CAP SERVICES AND REMOVE EQUIPMENT.
7.	EQUIPMENT TO BE REMOVED AND SALVAGED: DISCONNECT AND CAP SERVICES AND REMOVE EQUIPMENT AND DELIVER TO OWNER.
8.	COMPLY WITH ALL STATE AND LOCAL CODES AS TO REMOVAL AND DISPOSAL OF EQUIPMENT REMOVED FROM THE SITE.
1.	COMPLY WITH GOVERNING EPA NOTIFICATION REGULATIONS BEFORE BEGINNING SELECTIVE DEMOLITION.
2.	REMOVE PREVIOUSLY ABANDONED WORK IN THE WAY OF EXISTING CONSTRUCTION, OR AS NOTED.
3.	COMPLY WITH HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
4.	COMPLY WITH ANSI A10.6 AND NFPA 241.
5.	PERMITS: GIVE ALL REQUIRED NOTICES, FILE ALL REQUIRED PLANS AND SPECIFICATIONS RELATING TO THE WORK OF THIS SECTION WITH THE PROPER AUTHORITIES AND PAY FOR ANY REQUIRED PERMITS.
6.	ALL AIR-CONDITIONING EQUIPMENT AND SYSTEMS SHALL BE REMOVED DEMOLISHED WITHOUT RELEASING REFRIGERANTS. REFRIGERANT RECOVERY IS TO BE PERFORMED BY A REFRIGERANT RECOVERY TECHNICAL CERTIFIED BY AN EPA-APPROVED CERTIFICATION PROGRAM.
7.	ALL EQUIPMENT AND SYSTEMS TO BE REMOVED OR DEMOLISHED UNDER THIS SECTION AND NOT DESIRED BY OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE ALL SUCH EQUIPMENT FROM THE SITE PROMPTLY AFTER DETACHMENT FROM BUILDING STRUCTURE.
8.	STORAGE OR SALE OF REMOVED ITEMS OR MATERIALS ON-SITE IS NOT PERMITTED.
9.	IT IS UNKNOWN WHETHER HAZARDOUS MATERIALS WILL BE ENCOUNTERED IN THE WORK. IF MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURB; IMMEDIATELY NOTIFY ARCHITECT AND OWNER.
10.	EXISTING PIPING SHOWN ON DRAWINGS DOES NOT INDICATE FULL EXTENT OF PIPING DEMOLITION. FIELD VERIFICATIONS REQUIRED.



1 MECHANICAL - Auditorium Mechanical Demolition Plan
SCALE: 1/4" = 1'-0"



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Drawing Title:

AUDITORIUM MECHANICAL DEMOLITION PLAN

Revisions:

BID DOCUMENTS

Date: 10/26/2011
Project Number: 11066
Project Manager: PL
Drawn By: BLO
Scale: 1/4" = 1'-0"

HI.0