AIA Document A312, Performance Bond and Payment Bond – 1984 will be utilized for this project.

A copy of the document may be obtained at AIA Eastern Oklahoma, 2210-R South Main Street, Tulsa, Oklahoma 74114, (918) 583-0013.

END OF SECTION 00 07 03
AGREEMENT made as of the day of in the year
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

Tulsa Community College
6111 East Skelly Drive
Tulsa, Oklahoma 74135

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

Tulsa Community College
Southeast Campus Student Union and Campus Store Remodel
10300 East 81st Street
Tulsa, Oklahoma 74133

The Architect:
(Name, legal status, address and other information)

Beck Design
110 West 7th Street, Suite 710
Tulsa, Oklahoma 74119

The Owner and Contractor agree as follows.
TABLE OF ARTICLES

1 THE CONTRACT DOCUMENTS
2 THE WORK OF THIS CONTRACT
3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
4 CONTRACT SUM
5 PAYMENTS
6 DISPUTE RESOLUTION
7 TERMINATION OR SUSPENSION
8 MISCELLANEOUS PROVISIONS
9 ENUMERATION OF CONTRACT DOCUMENTS
10 INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS
The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT
The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
§ 3.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.
(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)

Date of commencement shall be August 31, 2015.

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner’s time requirement shall be as follows:

§ 3.2 The Contract Time shall be measured from the date of commencement.

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than ( ) days from the date of commencement, or as follows:
(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)
Project shall be substantially complete by December 21st, 2015.

<table>
<thead>
<tr>
<th>Portion of Work</th>
<th>Substantial Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>December 21, 2015</td>
</tr>
</tbody>
</table>

, subject to adjustments of this Contract Time as provided in the Contract Documents.

(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)

Liquidated damages are to be $2,000.00 for each calendar day of delay beyond the Contract Substantial Completion Date until the work is substantially complete.

For early completion of work, Owner agrees to pay Contractor a sum of $2,000.00 for each calendar day that the work is substantially complete prior to the Contract Substantial Completion Date.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor’s performance of the Contract. The Contract Sum shall be ($ ), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 4.3 Unit prices, if any:

(Identify and state the unit price; state quantity limitations, if any, to which the unit price will be applicable.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Units and Limitations</th>
<th>Price Per Unit ($0.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl Lettering and Decals</td>
<td></td>
<td>$8,000.00</td>
</tr>
</tbody>
</table>

ARTICLE 5 PAYMENTS

§ 5.1 PROGRESS PAYMENTS

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the day of the month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than ( ) days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)
§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor’s Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

.1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of percent ( %). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™–2007, General Conditions of the Contract for Construction;

.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of percent ( 10 %);

.3 Subtract the aggregate of previous payments made by the Owner; and

.4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201–2007.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

.1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work, retainage applicable to such work and unsettled claims; and (Section 9.8.5 of AIA Document A201–2007 requires release of applicable retainage upon Substantial Completion of Work with consent of surety, if any.)

.2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201–2007.

§ 5.1.8 Reduction or limitation of retainage, if any, shall be as follows:
(If it is intended, prior to Substantial Completion of the entire Work, to reduce or limit the retainage resulting from the percentages inserted in Sections 5.1.6.1 and 5.1.6.2 above, and this is not explained elsewhere in the Contract Documents, insert here provisions for such reduction or limitation.)

Upon 50% completion of construction, retainage may be reduced to 5% of the total cost of work completed and stored.

§ 5.1.9 Except with the Owner’s prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 FINAL PAYMENT
§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Section 12.2.2 of AIA Document A201–2007, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner’s final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect’s final Certificate for Payment, or as follows:

Init.

/ 

User Notes:

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(1280727668)
ARTICLE 6  DISPUTE RESOLUTION
§ 6.1 INITIAL DECISION MAKER
The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201–2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 BINDING DISPUTE RESOLUTION
For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201–2007, the method of binding dispute resolution shall be as follows:
(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.)

[ X ] Arbitration pursuant to Section 15.4 of AIA Document A201–2007

[ ] Litigation in a court of competent jurisdiction

[ ] Other (Specify)

ARTICLE 7  TERMINATION OR SUSPENSION
§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2007.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2007.

ARTICLE 8  MISCELLANEOUS PROVISIONS
§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

%  

§ 8.3 The Owner’s representative:
(Name, address and other information)

Mr. Steven Cox
Tulsa Community College
6111 East Skelly Drive
Tulsa, Oklahoma 74135

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Init.

User Notes:
§ 8.4 The Contractor’s representative:
(Name, address and other information)

§ 8.5 Neither the Owner’s nor the Contractor’s representative shall be changed without ten days written notice to the other party.

§ 8.6 Other provisions:

The Architect’s representative:

Mr. Joshua Ray
Beck Design
110 West 7th Street, Suite 710
Tulsa, Oklahoma 74119

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS
§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is this executed AIA Document A101–2007, Standard Form of Agreement Between Owner and Contractor.

§ 9.1.2 The General Conditions are AIA Document A201–2007, General Conditions of the Contract for Construction.

§ 9.1.3 The Supplementary and other Conditions of the Contract:

<table>
<thead>
<tr>
<th>Document</th>
<th>Title</th>
<th>Date</th>
<th>Pages</th>
</tr>
</thead>
</table>

§ 9.1.4 The Specifications:
(Either list the Specifications here or refer to an exhibit attached to this Agreement.)

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Date</th>
<th>Pages</th>
</tr>
</thead>
</table>

§ 9.1.5 The Drawings:
(Either list the Drawings here or refer to an exhibit attached to this Agreement.)

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
</table>

§ 9.1.6 The Addenda, if any:

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Pages</th>
</tr>
</thead>
</table>
Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

1. AIA Document E201™–2007, Digital Data Protocol Exhibit, if completed by the parties, or the following:

2. Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2007 provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor's bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)

Section 00 40 02 – Non-Collusion Affidavit
Section 00 40 03 – Bid Form
Section 00 07 03 – Performance and Payment Bond
Section 01 10 00 – Summary
Section 01 25 00 – Submittal Procedures
Section 01 40 00 – Quality Requirements
Section 01 50 00 – Temporary Facilities and Controls
Section 01 60 00 – Product Requirements
Section 01 78 00 – Closeout Submittals

ARTICLE 10 INSURANCE AND BONDS
The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201–2007.
(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201–2007.)

Type of insurance or bond                      Limit of liability or bond amount ($0.00)
Performance Bond and Payment Bond              100% of the Contract Sum
Builder’s Risk                                 100% of the Contract Sum
Defect / Maintenance Bond                      100% of the Contract Sum
Contractor’s Liability Insurance              $1,000,000 Each Occurrence
                                               $2,000,000 General Aggregate
                                               $1,000,000 Personal Injury
                                               $1,000,000 Product-Complete Operations Aggregate
                                               $1,000,000 Each Accident

Automobile Liability Insurance

This Agreement entered into as of the day and year first written above.

OWNER (Signature)       CONTRACTOR (Signature)
(Printed name and title) (Printed name and title)
Additions and Deletions Report for
AIA® Document A101™ – 2007

This Additions and Deletions Report, as defined on page 1 of the associated document, reproduces below all text the author has added to the standard form AIA document in order to complete it, as well as any text the author may have added to or deleted from the original AIA text. Added text is shown underlined. Deleted text is indicated with a horizontal line through the original AIA text.

Note: This Additions and Deletions Report is provided for information purposes only and is not incorporated into or constitute any part of the associated AIA document. This Additions and Deletions Report and its associated document were generated simultaneously by AIA software at 14:21:14 on 07/14/2015.

PAGE 1

Tulsa Community College
6111 East Skelly Drive
Tulsa, Oklahoma 74135

... 

Tulsa Community College
Southeast Campus Student Union and Campus Store Remodel
10300 East 81st Street
Tulsa, Oklahoma 74133

...

Beck Design
110 West 7th Street, Suite 710
Tulsa, Oklahoma 74119

PAGE 2

Date of commencement shall be August 31, 2015.

PAGE 3

Project shall be substantially complete by December 21st, 2015.

...

December 21, 2015

...

Liquidated damages are to be $2,000.00 for each calendar day of delay beyond the Contract Substantial Completion Date until the work is substantially complete.

For early completion of work, Owner agrees to pay Contractor a sum of $2,000.00 for each calendar day that the work is substantially complete prior to the Contract Substantial Completion Date.

...

Vinyl Lettering and Decals $8,000.00

PAGE 4

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User Notes: (1280727668)
.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of percent (10%);

Upon 50% completion of construction, retainage may be reduced to 5% of the total cost of work completed and stored.

PAGE 5

[X] Arbitration pursuant to Section 15.4 of AIA Document A201–2007

Mr. Steven Cox
Tulsa Community College
6111 East Skelly Drive
Tulsa, Oklahoma 74135

PAGE 6

The Architect’s representative:

Mr. Joshua Ray
Beck Design
110 West 7th Street, Suite 710
Tulsa, Oklahoma 74119

PAGE 7

Section 00 40 02 – Non-Collusion Affidavit
Section 00 40 03 – Bid Form
Section 00 07 03 – Performance and Payment Bond
Section 01 10 00 – Summary
Section 01 25 00 – Submittal Procedures
Section 01 40 00 – Quality Requirements
Section 01 50 00 – Temporary Facilities and Controls
Section 01 60 00 – Product Requirements
Section 01 78 00 – Closeout Submittals

Performance Bond and Payment Bond 100% of the Contract Sum
Builder’s Risk 100% of the Contract Sum
Defect / Maintenance Bond 100% of the Contract Sum
Contractor’s Liability Insurance $1,000,000 Each Occurrence
$2,000,000 General Aggregate
$1,000,000 Personal Injury
$1,000,000 Product-Complete Operations Aggregate
Automobile Liability Insurance $1,000,000 Each Accident
Certification of Document's Authenticity
AIA® Document D401™ – 2003

I, Don Beck, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 14:21:14 on 07/14/2015 under Order No. 3139719287_1 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A101™ – 2007, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, as published by the AIA in its software, other than those additions and deletions shown in the associated Additions and Deletions Report.

(Signed)

>Title

(Dated)
General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)
Tulsa Community College
Southeast Campus Student Union and Campus Store Remodel
10300 East 81st Street
Tulsa, Oklahoma 74133

THE OWNER:
(Name, legal status and address)
Tulsa Community College
6111 East Skelly Drive
Tulsa, Oklahoma 74135

THE ARCHITECT:
(Name, legal status and address)
Beck Design
110 West 7th Street, Suite 710
Tulsa, Oklahoma 74119

TABLE OF ARTICLES

1 GENERAL PROVISIONS
2 OWNER
3 CONTRACTOR
4 ARCHITECT
5 SUB CONTRACTORS
6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
7 CHANGES IN THE WORK
8 TIME
9 PAYMENTS AND COMPLETION
10 PROTECTION OF PERSONS AND PROPERTY
11 INSURANCE AND BONDS
12 UNCOVERING AND CORRECTION OF WORK
13 MISCELLANEOUS PROVISIONS
14 TERMINATION OR SUSPENSION OF THE CONTRACT
15 CLAIMS AND DISPUTES

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.
This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.
SECTION 00 73 00 – SUPPLEMENTARY CONDITIONS

The following supplements modify the “General Conditions of the Contract for Construction,” AIA Document A201-2007. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

ARTICLE 1 GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

Add the following sentence to the end of Subparagraph 1.1.1:
1.1.1 The Contract Documents executed or identified in accordance with Subparagraph 1.5.1 shall prevail in case of an inconsistency with subsequent versions made through manipulatable electronic operations involving computers.

Add the following Paragraph 1.7 to Article 1:
1.7 Representatives of the Owner, Contractor and Architect shall meet periodically at mutually agreed-upon intervals for the purpose of establishing procedures to facilitate cooperation, communication and timely responses among the participants. By participating in this arrangement, the parties do not intend to create additional contractual obligations or modify the legal relationships which may otherwise exist.

ARTICLE 2 OWNER

2.2 INFORMATION AND SERVICE REQUIRED OF THE OWNER

Replace Subparagraph 2.2.5 with the following:
2.2.5 The Contractor will be furnished with a digital copy of the Drawings and Project Manual, including any Addenda, for purposes of reproduction and distribution to subcontractors and suppliers. There is no intention to provide paper copies of documents.

ARTICLE 3 CONTRACTOR

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

Add the following Subparagraph 3.2.5 to Paragraph 3.2:
3.2.5 The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for the Architect to evaluate and respond to the Contractor’s requests for interpretation, where such information was available to the Contractor from a careful study and comparison to the Contract Documents, field conditions, other owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation.

3.4 LABOR AND MATERIALS

Delete Subparagraph 3.4.2 and substitute the following:
3.4.2 After the Contract has been executed, the Owner and Architect will consider a formal request for the substitution of products in place of those specified only under the conditions set forth in the Substitution Procedures section (Division 01 of the Project Manual). By making requests for substitutions, the Contractor:

.1 represents that the Contractor has personally investigated the proposed substitute product and determined that is equal or superior in all respects to that specified;
.2 represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified;

14016 / Tulsa Community College Southeast Campus Student Union & Campus Store Remodel
SUPPLEMENTARY CONDITIONS
00 73 00-1
06/25/2015
.3 certifies that the cost data presented is complete and includes all related costs under this contract except the Architect’s redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent; and
.4 will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

Add the following Subparagraph 3.4.4 to Paragraph 3.4:
3.4.4 The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect to evaluate the Contractor’s proposed substitutions and to make agreed upon changes in the Drawings and Specifications made necessary by the Owner’s acceptance of such substitutions.

3.9 SUPERINTENDENT

Add the following Subparagraph 3.9.4 to 3.9:
3.9.4 The Contractor shall employ a superintendent or an assistant to the superintendent who will perform as a coordinator for mechanical and electrical Work. The coordinator shall be knowledgeable in mechanical and electrical systems and capable of reading, interpreting and coordinating Drawings, Specifications, and shop drawings pertaining to such systems. The coordinator shall assist the Subcontractors in arranging space conditions to eliminate interference between the mechanical and electrical systems and other Work and shall supervise the preparation of coordination drawings documenting the spatial arrangements for such systems within restricted spaces. The coordinator shall assist in planning and expediting the proper sequence of delivery of mechanical and electrical equipment to the site.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

Add Subparagraph 3.12.11 to Paragraph 3.12:
3.12.11 The Architect’s review of Contractor’s submittals will be limited to examination of an initial submittal and one (1) re-submittal. The Architect’s review of additional submittals will be made only with the consent of the Owner after notification by the Architect. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for evaluation of such additional re-submittals.

ARTICLE 4 ARCHITECT

4.2 ADMINISTRATION OF THE CONTRACT

Add Clause 4.2.2.1 to Subparagraph 4.2.2:
4.2.2.1 The Contractor shall reimburse the Owner for compensation paid to the Architect for additional site visits made necessary by the fault, neglect or request of the Contractor.

ARTICLE 5 SUBCONTRACTORS

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

Replace the first sentence in Subparagraph 5.2.1 with the following:
5.2.1 Not later than 7 days after the date of the commencement of the Work, the Contractor shall furnish in writing to the Owner through the Architect the names or persons or entities proposed as manufacturers, fabricators or material suppliers for the products, equipment and systems identified in the Project Management and Coordination section (Division 01 of the Project Manual) and, where applicable, the name of the installing Subcontractor.
ARTICLE 7  CHANGES IN THE WORK

Add the following Subparagraph 7.1.4 to Paragraph 7.1:
7.1.4 The combined overhead and profit included in the total cost to the Owner of a change in the Work shall be based on the following schedule:

.1 For Subcontractors and Sub-subcontractors, not more than 10 percent of the cost of the Work. Contractor may add no more than 5 percent to subcontractor costs for processing such changes.
.2 For the Contractor, for Work performed by the Contractor's own forces, not more than 10 percent of the cost.
.3 Cost to which overhead and profit is to be applied shall be determined in accordance with subparagraph 7.3.6.

ARTICLE 9  PAYMENTS AND COMPLETION

9.3 APPLICATIONS FOR PAYMENT

Add the following sentence to Subparagraph 9.3.1:
9.3.1 The form of Application for Payment, duly notarized, shall be a current authorized edition of AIA Document G702, Application and certificate for Payment, supported by a current authorized edition of AIA Document G703, Continuation Sheet.

Revise Subparagraph 9.6.4 to the following:
9.6.4 The Contractor shall provide to the Owner waivers of lien from all subcontractors, sub-subcontractors, and material suppliers for the prior month's pay application. The Architect shall have no obligation to pay or see to the payment of money to a Subcontractor except as may otherwise be required by law.

9.11 LIQUIDATED DAMAGES

Add the following paragraph to Article 9:
9.11.1 The Contractor and the Contractor's surety, if any, shall be liable for and shall pay the Owner the sums herein stipulated as liquidated damages for each calendar day of delay beyond the contract Substantial Completion date, December 21, 2015, until the Work is Substantially Complete.

9.12 EARLY COMPLETION OF WORK INCENTIVE

Add the following paragraph to Article 9:
9.12.1 The Owner agrees to pay the Contractor the sum of $2,000.00 as an early completion of work incentive, for each calendar day that the work is Substantially Complete prior to the date of Substantial Completion, December 21, 2015.

ARTICLE 10  PROTECTION OF PERSONS AND PROPERTY

10.2 SAFETY OF PERSONS AND PROPERTY

Add the following Clauses 10.2.4.1 and 10.2.4.2 to Subparagraph 10.2.4:
10.2.4.1 When use or storage of explosives or other hazardous materials, substances or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall provide the Owner with reasonable advance notice.

10.2.4.2 If the Contract Documents require the Contractor to handle materials or substances that under certain circumstances may be designated as hazardous, the Contractor shall handle such materials in an appropriate manner.
ARTICLE 11 INSURANCE AND BONDS

11.1 CONTRACTOR’S LIABILITY INSURANCE

Add the following Clauses 11.1.2.1 through 11.1.2.3 to Subparagraph 11.1.2:

11.1.2.1 The limits for Commercial General Liability insurance including coverage for Premises-Operations, Independent Contractors’ Protective, Products-Completed Operations, Contractual Liability, Personal Injury and Broad Form Property Damage (including coverage for Explosion, Collapse and Underground Hazards) shall be as follows:

$1,000,000 Each Occurrence
$2,000,000 General Aggregate
$1,000,000 Personal and Advertising Injury
$1,000,000 Product-Complete Operations Aggregate

.1 The policy shall be endorsed to have the General Aggregate apply to this Project only.

.2 The Contractual Liability insurance shall include coverage sufficient to meet the obligations in AIA Document A201-2007 under Paragraph 3.18.

.3 Products and Complete Operations insurance shall be maintained for a minimum period of at least two years after either 90 days following Substantial Completion or final payment, whichever is earlier.

11.1.2.2 Automobile Liability insurance (owned, non-owned and hired vehicles) for bodily injury and property damage shall be as follows:

$1,000,000 Each Accident

Add the following sentence to Subparagraph 11.1.3

11.1.2 If this insurance is written on a Commercial General Liability policy form, the certificates shall be ACORD for 25-S, completed and supplemented in accordance with AIA Document G715, Instruction Sheet and Supplemental Attachment for ACORD Certificate of Insurance 25-S.

11.3 PROPERTY INSURANCE

Revise Subparagraph 11.3.1 to read as follows:

11.3.1 Unless otherwise provided, the Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder’s risk “all-risk” or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

Add the following sentence to Clause 11.3.1.3:

11.3.1.3 This property insurance shall be written with a $500 deductible.

Replace Clause 11.3.1.4 with the following:

11.3.1.4 The Contractor shall at the Contractor’s own expense provide insurance coverage for materials stored off the site after written approval of the Owner at the value established in the approval, and also for portions or the Work in transit until such materials are permanently attached to the Work. Proof of insurance shall be provided with the request for payment for stored materials.
Add the following Clause 11.3.1.6 to Subparagraph 11.3.1:

11.3.1.6 The insurance required by Paragraph 11.3 is not intended to cover machinery tools or equipment owned or rented by the Contractor that are utilized in the performance of the Work but not incorporated into the permanent improvements. The Contractor shall, at the Contractor’s own expense, provide insurance coverage for owned or rented machinery, tools or equipment, which shall be subject to the provisions or Subparagraph 11.3.7.

11.4 PERFORMANCE AND PAYMENT BOND

Replace Subparagraph 11.4.1 with the following:

11.4.1 The Contractor shall furnish bonds covering faithful performance of the contract and payment of obligations arising thereunder. Bonds may be obtained through the Contractor’s usual source and the cost thereof shall be included in the Contract Sum. The amount of each bond shall be equal to the one hundred percent (100%) of the Contract Sum.

Replace Subparagraph 11.4.2 with the following:

11.4.2 The Contractor shall deliver the required bonds to the Owner not later than three days following the date the Agreement is entered into, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall, prior to the commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.

Add the following Clause to Subparagraph 11.4.2:

11.4.2.1 The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

Add the following Paragraph:

11.5 DEFECT/MAINTENANCE BOND

11.5.1 The Contractor shall furnish a Maintenance and Defect Bond covering faithful performance of warranty obligations arising thereunder. Bonds may be obtained through the Contractor’s usual source and the cost thereof be included in the Contract Sum. The amount of the bond shall be equal to one hundred percent (100%) of the Contract Sum.

11.5.1.1 The Contractor shall deliver the required bond to the Owner not later than three days following the date the Agreement is entered into, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall, prior to the commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.

11.5.1.2 The Contractor shall require the attorney-in-fact who executes the required bond on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

12.2 CORRECTION OF WORK

Add the following Clause 12.2.2.4 to Subparagraph 12.2.2:

12.2.2.4 Upon request by the Owner and prior to the expiration of one year from the date of Substantial Completion, the Architect will conduct and the Contractor shall attend a meeting with the Owner to review the facility operations and performance.
ARTICLE 15 CLAIMS AND DISPUTES

15.1.5 CLAIMS FOR ADDITIONAL TIME

Add the following Clauses 15.1.5.1.1 and 15.1.5.1.2 to Subparagraph 15.1.5.1:

15.1.5.1.1 Claims for increase in the Contract Time shall set forth in detail the circumstances that form the basis for the Claim, the date upon which each cause of delay began to affect the progress of the Work, the date upon which each cause of delay ceased to affect the progress of the Work and the number of days’ increase in the Contract Time claimed as a consequence of each such cause of delay. The Contractor shall provide such supporting documentation as the Owner may require including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the Claim.

15.1.5.1.2 The Contractor shall not be entitled to a separate increase in the Contract Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the Contractor.

15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

Add the following Clause 15.1.6.3 to Subparagraph 15.1.6:

15.1.6.3 If, before expiration of 30 days from the date of execution for this Agreement, the Owner obtains by separate agreement and furnishes to the Contractor a similar mutual waiver of all claims from the Architect against the Contractor for consequential damages which the Architect may incur as a result of any act or omission of the Owner or Contractor, then the waiver of consequential damages by the Owner and Contractor contained in this Subparagraph 15.1.6 shall be applicable to claims by the Contractor against the Architect.

END OF DOCUMENT 00 0702
PART 1  GENERAL
1.01  SECTION INCLUDES
   A.  Mock-ups.
   B.  Control of installation.
   C.  Tolerances.
   D.  Testing and inspection services.
   E.  Manufacturers' field services.

1.02  REFERENCE STANDARDS

1.03  SUBMITTALS
   A.  Design Data: Submit for Beck Design's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.
   B.  Test Reports: After each test/inspection, promptly submit two copies of report to Beck Design and to Contractor.
      1.  Include:
         a.  Date issued.
         b.  Project title and number.
         c.  Name of inspector.
         d.  Date and time of sampling or inspection.
         e.  Identification of product and specifications section.
         f.  Location in the Project.
         g.  Type of test/inspection.
         h.  Date of test/inspection.
         i.  Results of test/inspection.
         j.  Conformance with Contract Documents.
         k.  When requested by Beck Design, provide interpretation of results.
      2.  Test report submittals are for Beck Design's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.
   C.  Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Beck Design, in quantities specified for Product Data.
      1.  Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
      2.  Certificates may be recent or previous test results on material or product, but must be acceptable to Beck Design.
   D.  Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
E. Erection Drawings: Submit drawings for Beck Design's benefit as contract administrator or for Owner.
   1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.04 REFERENCES AND STANDARDS

A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Should specified reference standards conflict with Contract Documents, request clarification from Beck Design before proceeding.

C. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Beck Design shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.05 TESTING AND INSPECTION AGENCIES

A. Contractor shall employ and pay for services of an independent testing agency to perform other specified testing and inspection.

B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

C. Contractor Employed Agency:

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Beck Design before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Have Work performed by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 MOCK-UPS

A. Before installing portions of the Work where mockups are required, construct mockups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.

B. Provide mock-up for exterior envelope, work includes: all reviewed submittals required by the Contract Documents, to establish compliance with the design intent as well as the specified requirements to provide a complete and watertight facility.
C. Accepted mock-ups establish the standard of quality the Beck Design will use to judge the Work.

D. Integrated Exterior Mockups: construct integrated exterior mockup as indicated on Drawings. Coordinate installation of exterior envelope materials and products as required in individual Specification Sections. Provide adequate supporting structure for mockup materials as necessary.

E. Notify Beck Design fifteen (15) working days in advance of dates and times when mockups will be constructed.

F. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.

G. Refer to Section 01 43 39 - Mock-up Wall Construction

H. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

I. Obtain Beck Design's approval of mockups before starting work, fabrication, or construction.

J. Accepted mock-ups shall be a comparison standard for the remaining Work.

K. Where mock-up has been accepted by Beck Design and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Beck Design.

3.03 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Beck Design before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 TESTING AND INSPECTION

A. See individual specification sections for testing and inspection required.

B. Testing Agency Duties:
   2. Perform specified sampling and testing of products in accordance with specified standards.
   3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
   4. Promptly notify Beck Design and Contractor of observed irregularities or non-conformance of Work or products.
   5. Perform additional tests and inspections required by Beck Design.
   6. Submit reports of all tests/inspections specified.

C. Limits on Testing/Inspection Agency Authority:
   1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
   2. Agency may not approve or accept any portion of the Work.
   3. Agency may not assume any duties of Contractor.
   4. Agency has no authority to stop the Work.

D. Contractor Responsibilities:
   1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
   2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
   3. Provide incidental labor and facilities:
      a. To provide access to Work to be tested/inspected.
b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
c. To facilitate tests/inspections.
d. To provide storage and curing of test samples.

4. Notify Beck Design and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.

5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Beck Design.

F. Re-testing required because of non-conformance to specified requirements shall be paid for by Contractor.

3.05 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment and ________ as applicable, and to initiate instructions when necessary.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.06 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not conforming to specified requirements.

B. If, in the opinion of Beck Design, it is not practical to remove and replace the Work, Beck Design will direct an appropriate remedy or adjust payment.

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY:

A. This section includes the furnishing, installation, and connection of wiring devices.
1. Receptacles, receptacles with integral GFCI, and associated device plates.
2. Weather-resistant receptacles.
3. Snap switches and wall-box dimmers.
4. Pendant cord-connector devices.
5. Cord and plug sets.
6. Indoor occupancy sensors.

1.3 DEFINITIONS:

A. EMI: Electromagnetic interference.
B. GFCI: Ground-fault circuit interrupter.
C. Pigtail: Short lead used to connect a device to a branch-circuit conductor.
D. RFI: Radio-frequency interference.
E. SPD: Surge Protective Device.

1.4 ADMINISTRATIVE REQUIREMENTS:

A. Coordination:
1. Receptacles for Owner Furnished Equipment: Match plug configurations.
2. Cord and Plug Sets: Match equipment requirements.

1.5 ACTION SUBMITTALS:

A. Product Data (Where indicated in Section “Common Work Results for Electrical”, provide the following information): For each type of product.
B. Shop Drawings (Where indicated in Section “Common Work Results for Electrical”, provide the following information): List of legends and description of materials and process used for premarking wall plates.

1.6 CLOSEOUT SUBMITTALS:

A. Operational and Maintenance Data: For wiring devices to include all manufacturers’ packing label warnings and instruction manuals that include labeling conditions.

PART 2 - PRODUCTS

2.1 GENERAL WIRING DEVICE REQUIREMENTS:

A. Source Limitations: Obtain each type of wiring device and associated wall plate from single source from single manufacturer.
B. Wiring Devices, Components, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
C. Comply with NFPA 70.

2.2 RECEPTACLES:

A. Comply with NEMA WD 1, NEMA WD 6, and UL 498.
B. LIST OF ACCEPTABLE RECEPTACLE MANUFACTURERS

<table>
<thead>
<tr>
<th>Manufacturer:</th>
<th>Volt</th>
<th>Hubbell / Kellemes</th>
<th>Leviton</th>
<th>P&amp;S</th>
<th>Bryant</th>
<th>Cooper Wiring Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Specification Grade:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplex:</td>
<td>20 A. 125 V.</td>
<td>5352A</td>
<td>5352</td>
<td>5362</td>
<td>BRY5362</td>
<td>5352</td>
</tr>
<tr>
<td>Ground Fault:</td>
<td>20 A. 125 V.</td>
<td>GF20LA</td>
<td>7899</td>
<td>2095</td>
<td>---</td>
<td>VGF20</td>
</tr>
<tr>
<td>Weather Resistant Ground Fault:</td>
<td>20 A. 125 V.</td>
<td>GFTR20</td>
<td>---</td>
<td>2095TRWR</td>
<td>---</td>
<td>WRVGF20</td>
</tr>
</tbody>
</table>

Tulsa Community College
Southeast Campus Student Union and Campus Store Remodel
Tulsa, Oklahoma

15 July 2015

26 2726-1

Wiring Devices
C. Weatherproof duplex receptacles shall be weather resistant GFCI grounded duplex receptacles.
   1. All receptacles shall be mounted with the same orientation (horizontal or vertical). When a different orientation is required or desired, obtain permission from the Architect/Engineer prior to rough-in.
   2. Damp Locations: Provide with a single weatherproof coverplate.
   2. Wet Locations: Provide “In-Use” extra-duty metallic weatherproof cover.
      a. Hubbell #WP26E (vertical) or #WP26EH (horizontal)
      b. Red Dot #CKMUV (vertical)
D. See plans for Special Outlet Schedule.
E. Receptacle body shall be formed of high-impact nylon faced thermoplastic or urea and receptacle contacts shall be Bronze. Hard use industrial specification grade receptacles shall have a one piece brass bridge with integral ground contacts.
F. When only one receptacle is connected to a 20 amp circuit by itself, that receptacle must be rated 20 Amp.
G. All receptacles shall be self-grounding with ground lug.
H. Install receptacles to clear all cabinets, equipment, etc.
I. Color of receptacles: Grey. Verify colors prior to ordering.
J. All 120V, 15 or 20A receptacles located, within kitchens, within 6 feet of a sink, exterior locations, elevator machine rooms, elevator pits, garages, per NFPA 70 and as located on the plans shall be ground fault circuit interrupters (GFCI) for personnel protection (Class A) with 5ma trip. Feed through GFCI receptacles or GFCI breakers may be used to protect other receptacles in the same room and on the same circuit if wired per the manufacturer’s recommendations. Prior to final inspection, perform ground fault test on each protected receptacle and submit list of all receptacles tested with results to the Engineer. Label receptacles that are GFCI protected by another feed through GFCI receptacle or by GFCI breaker “GFCI protected”.
K. Provide duplex receptacle on separate circuit beside each telephone terminal board location and other communications equipment requiring 120V, power.
L. All 15 and 20 amp, 125 or 250 volt non-locking receptacles in damp or wet locations should be listed as “weather resistant”.

2.3 PENDANT CORD-CONNECTOR DEVICES:
A. Description:
   1. Matching plug and receptacle body connector.
   3. External Cable Grip: Woven wire mesh type made of high-strength, galvanized steel wire strand, matched to cable diameter, and with attachment provision designed for corresponding connector.

2.4 CORD AND PLUG SETS:
A. Description:
   1. Match voltage and current ratings and number of conductors to requirements of equipment being connected.
   2. Cord: Rubber-insulated, stranded-copper conductors, with Type SOW-A jacket, with green-insulated grounding conductor and ampacity of at least 130 percent of the equipment rating.

2.5 TOGGLE SWITCHES:
A. Wall Switches: Wall switches in general, used to control lighting shall be quiet operating.
B. Comply with NEMA WD 1, UL 20, and FS W-S-896.
C. Switches shall be single pole, two-pole, three-way, four-way, keyed, and with pilot light as called for on the drawings. Groups of switches shall be under one gangplate. Where switches are in fire rated walls groups of switches shall be maximum of two (2) gangs under one cover plate.
D. Switches shall be as follows unless specified otherwise.
Single Pole  20 A.  120 V. / 277 V.
Two Pole    20 A.  120 V. / 277 V.
Three-Way  20 A.  120 V. / 277 V.
Four-Way   20 A.  120 V. / 277 V.
Pilot Light 20 A.  120 V. / 277 V.
Key Switch  20 A.  120 V. / 277 V.

E. When only one switch is connected to a 20 amp circuit by itself, it must be rated 20A.
F. All switches shall be self grounding w/ground lugs.
G. LIST OF ACCEPTABLE SWITCH MANUFACTURERS

<table>
<thead>
<tr>
<th>Manufacturer:</th>
<th>P&amp;S</th>
<th>Hubbell / Kellems</th>
<th>Leviton</th>
<th>Bryant</th>
<th>Cooper Wiring Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specification Grade Switches</td>
<td>PS 20AC Series</td>
<td>HBL 1220 Series</td>
<td>1220 Series</td>
<td>4901 Series</td>
<td>1220 Series</td>
</tr>
<tr>
<td>Light Commercial/ Residential Grade</td>
<td>500-G Series</td>
<td>CSB 120 Series</td>
<td>1100-G Series</td>
<td>4801GLI Series</td>
<td>CSB/AH 1200 Series</td>
</tr>
<tr>
<td>Key Switches: PS 20AC-L Series</td>
<td>*HBL 1220-L Series</td>
<td>1221-L Series</td>
<td>4901L Series</td>
<td>AH 1990L Series</td>
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</tr>
<tr>
<td>//DESIGNER//</td>
<td>26021 Series</td>
<td>DS 120 Series</td>
<td>5621 Series</td>
<td>9901PL112 Series</td>
<td>6620 Series</td>
</tr>
</tbody>
</table>

H. Pilot light switches shall be illuminated toggle switch lighted red in "on" position. Key switches shall be master keyed.
I. Color of switches: Ivory. Verify colors prior to ordering.
J. Color of switches in sales area: Gray. Verify colors prior to ordering.
K. Provide barriers between 277V switches and between 277V and 120V switches installed in a common outlet box.

2.6 WALL-BOX DIMMERS:
A. Comply with UL 1472. Provide with single pole or three-way switching per the drawings.
B. Wall box dimmers shall be linear slide type with smooth face plates, no exposed cooling fins, equal to Lutron NT Series or Leviton (Monet) MN Series, for loads to 1500W. For loads 1500W to 2000W, Lutron N-2000 shall be used. Wattage as required by load plus 25%. Only Lutron dimmers shall be used with Lutron dimming ballasts.
C. Dimmers shall be provided with required filtering and of the types (solid state, low voltage) as required for the lamps connected. Lamp hum will not be tolerated.

2.7 WALL PLATES:
A. Wall plates shall be flexible (non-breakable) nylon or polycarbonate.
B. Wall plates in sales areas shall be stainless steel.
C. Verify colors with architect prior to ordering. Nylon plate manufacturer shall be the same as the device manufacturer so that colors match.
D. For receptacles or switches mounted adjacent to each other, wall plates shall be common for each group of receptacles or switches.
E. Provide plates for all telephone, cable TV, communication outlets.

2.8 INDOOR OCCUPANCY SENSORS
A. Manufacturers: Subject to compliance with requirements set forth by the drawings and these specifications, provide products by one of the following:
   1. Hubbell Building Automation/Unenco
   3. Watt Stopper
   4. Synergy Lighting Controls; Acuity Brands
B. General:
   1. Operation: Unless otherwise indicated, turn lights on when covered area is occupied and off when unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 5 to 30 minutes. At time of installation, Contractor to set sensor at maximum sensitivity and a time out of 20 minutes.
2. Sensor Output: Contacts rated to operate the connected relay, complying with UL 773A. Sensor shall be powered from the relay unit.

3. Relay Unit: Dry contacts rated for 20A ballast load at 120V and 277V ac, for 13A tungsten at 120V ac, and for 1 hp at 120-V ac. Power supply to sensor shall be 24V dc, 150mA, Class 2 power source as defined by NFPA 70.

4. Mounting:
   a. Sensor: Suitable for mounting in any position on a standard outlet box.
   b. Relay/Power Pack: Externally mounted through a 1/2-inch (13-mm) knockout in a standard electrical enclosure.
   c. Time-Delay and Sensitivity Adjustments: Recessed and concealed behind door.

5. Indicator: LED, to show when motion is being detected during testing and normal operation of the sensor.

C. Sensor Types:
   1. Passive infrared (PIR) Type: Ceiling mounting; detect occupancy by sensing a combination of heat and movement in area of coverage. Typical usages include (but are not limited to) small restrooms, storage rooms, and high volume spaces (i.e. work bays, gymnasia, etc.).
   2. Ultrasonic Type: Ceiling mounting; detect occupancy by sensing a change in pattern of reflected ultrasonic energy in area of coverage. Typical usages include (but are not limited to) large storage spaces, large or multiple stall restrooms, open offices, corridors, break rooms, and work areas.
   3. Dual-Technology Type: Ceiling mounting; detect occupancy by using a combination of PIR and ultrasonic detection methods in area of coverage. Particular technology or combination of technologies that controls on-off functions shall be selectable in the field by operating controls on unit. Typical usages include (but are not limited to) classrooms, large offices, and meeting rooms.

D. List of approved products:

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Hubbell/Unencco</th>
<th>Leviton</th>
<th>Wattstopper</th>
<th>Synergy</th>
<th>Greengate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wall Mounted, Single Relay,</td>
<td>LHIRS</td>
<td>OSS-ID</td>
<td>PW-100</td>
<td>LIRW</td>
<td>ONW-P-1001-MV</td>
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<td>Passive Infrared (900SF)</td>
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<tr>
<td>2. Wall Mounted, Dual Relay,</td>
<td>LHIRD</td>
<td>ODS0D-</td>
<td>PW-200</td>
<td>LIRW</td>
<td>ONW-P-1001-DMV</td>
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<tr>
<td>Passive Infrared</td>
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<td>3. Ceiling Mounted Ultrasonic</td>
<td>OMNIUS 1000</td>
<td>OSC10-</td>
<td>WT-1105</td>
<td>LUSO H</td>
<td>ODC-U-1001</td>
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<tr>
<td>(1000SF)</td>
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<td>UOW</td>
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<td>(2000SF)</td>
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<td>5. Ceiling Mtd Ultrasonic (Corridor)</td>
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<td>WT-2255</td>
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<td>Technology (1000SF)</td>
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<td>MOW</td>
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<td>7. Wall/Ceiling Mounted Dual-</td>
<td>LODT</td>
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<td>DT-200</td>
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<tr>
<td>Technology (2000SF)</td>
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<tr>
<td>8. Electronic Timer Switch*</td>
<td>TD-200</td>
<td>TS-400</td>
<td>TSW-MV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Intermatic #EI40C shall be an acceptable substitution.

E. Manufacturer to provide scaled floor plan drawing(s) that indicate recommended device layout and placement.

PART 3 - EXECUTION

3.1 INSTALLATION:
   A. Installation shall be in accordance with NFPA 70, and as shown on the drawings.
   B. Comply with NECA 1.
C. Switches shall be located on the latch side of all doors. If switches must be located on the hinge side of a door, they shall be located so that they are not behind the door when it is open. All questionable locations shall be brought to the Engineers/Architects attention.

D. Verify all outlet locations on the job prior to rough-in. Locations may be altered up to 6'-0" in any direction without additional cost to the Owner.

E. When conductors larger than #12 AWG are used on 15A or 20A circuits, splice #12 AWG pigtails for device connections.

F. Install ground pin up on vertically mounted receptacles and install ground pin to the right on horizontally mounted receptacles.

G. Dimmers: Do not remove cooling fins from dimmers. Space boxes as required.

3.2 FIELD QUALITY CONTROL:

A. Convenience Receptacles:

1. Verify ground continuity.
2. Verify correct polarity of hot and neutral conductors.

END OF SECTION 26 2726
PART 1 - GENERAL
1.1 DESCRIPTION:
A. This section of the specifications includes the furnishing, installation, expansion, and connection to an existing solid-state, low voltage, modular, hardwire, supervised fire alarm system to form a complete coordinated system ready for operation. It shall include, but not be limited to, alarm initiating devices, alarm indicating devices, control panels, auxiliary control devices, annunciators, power supplies, and wiring as shown on the drawings and specified. The setting of all addressable devices shall be performed by the manufacturer. The fire alarm system shall consist of all necessary hardware, equipment, and software programming to perform one-way supervised automatic voice alarm operations. Voice evacuation signaling shall be installed throughout the building, as described in this section.

B. Fire Alarm systems shall comply with requirements of NFPA 70, 72, (including appendices) 90A, 101 for local building systems except as modified and supplemented by this specification. This is a performance specification. The devices shown on the drawings indicate design intent and shall be the minimum provided. Provide all other devices as required by other governing laws, codes, standards, and local inspectors.

C. The Electrical Contractor shall prepare design drawings (including plans showing device locations and riser diagram), calculations, documents, and catalogs cut sheets on all components and submit as shop drawings for approval. The system designer shall be identified on the system design documents. The system designer and installer shall provide evidence of their qualifications and/or certifications when required by the AHJ or engineer of record. Include voice/alarm signaling-service equipment rack or console layout, grounding schematic, amplifier power calculations, and single-line connection diagram.

1. Submit with all other required submittals to the local authority having jurisdiction (AHJ) and obtain approval. After approval stamp is secured from the local AHJ, the shop drawings shall be submitted to the Engineer for final approval.

1.2 CONTROL PANELS:
A. Utilize existing control panel. Expand as required.

PART 2 - PRODUCTS
2.1 EQUIPMENT AND MATERIAL, GENERAL:
A. All equipment and components shall be new, and the manufacturer's current model. The materials, appliances, equipment and devices shall be tested and listed by Underwriters Laboratories, Inc., and Factory Mutual Research Corporation. The authorized representative of the manufacturer of the major equipment such as control panel, annunciator, transmitters, and initiating devices, shall install and be responsible for satisfactory total system operation and its certification. Manufacturer shall provide NICET certified personnel to test equipment.

B. *Approved Manufacturers: Compatible with existing manufacturer – Edwards/EST.

2.2 WIRING:
A. Conduit and Wire Sections RACEWAY SYSTEMS and LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES shall apply:
   1. This contractor shall furnish and install all wiring, conduit, junction boxes and outlet boxes required for the installation of a complete system. All wiring shall be installed in red colored metallic conduit; wiring shall be color coded throughout and shall test free and clear of opens, grounds and shorts between conductors. All wiring shall be #18 gauge or minimum size as determined by the manufacturer, copper, with the exception of audio and visual alarm devices which shall have #14 gauge copper. All wiring shall have a minimum insulation rating of 300V. All equipment shall be grounded with an approved earth ground wire being supplied at the control panel. All wiring shall be in conformance with
Article 760 of the National Electric Code. Audible and visual devices shall be capable of being controlled individually.

2. Contractor and equipment supplier shall jointly provide a proposed riser diagram for the fire alarm system indicating all devices, equipment, and wiring with the submittals prior to construction. If changes are made during construction a corrected riser diagram shall be submitted with the operating and maintenance manuals upon project completion. Riser diagram shall use symbols as shown on the drawings and shall have room numbers adjacent to all devices. All wiring shall be in conduit.

3. Wires in junction boxes and cabinets shall be permanently tagged and identified with metal or phenolic tags attached by nylon ties.

4. Where partial evacuation or relocation is used, all fire alarm wiring routed outside of the evacuation signaling zone it serves, shall have a minimum pathway survivability level of 2 per NFPA 72. The following methods can be used to meet NFPA 72 Pathway Survivability Level 2 requirements:
   a. CI Cable (not in conduit):
      1) Cable shall be 2-hour fire-rated circuit integrity (CI) cable UL Listed for installation without conduit.
      2) Cable shall be installed and supported per manufacturer's and UL requirements.
   b. CIC Cable (CI cables in conduit):
      1) Cable shall be 2-hour fire rated cable system (electrical protective system). Cable shall be UL Listed for installation in steel conduit system.
      2) Conduit supports shall be located a maximum of 5'-0" on center.
      3) System shall be installed and supported per manufacturer's and UL requirements.

B. Terminal Boxes, Junction Boxes and Cabinets:
   1. Shall be galvanized steel and in accordance with UL.
   2. Paint box and cover red and identify with letters of white paint stenciled as "Fire Alarm System" in accordance with Section PAINTING.
   3. Junction boxes shall have a volume 40 percent greater than required by the NEC. Minimum sized wire shall be considered as 14 AWG for calculation purposes.
   4. Terminal cabinets shall have identified pressure type terminal strips, and shall be located at the base of each riser as shown on the drawings.

C. Initiating circuits shall be arranged to serve like categories (manual, smoke, waterflow). Mixed category circuitry shall not be permitted.

D. Audible indicating devices and visual indicating devices shall be capable of being controlled individually.

2.3 LOCATION CHARTS:
   A. Print with easily readable, uppercase type, minimum 3/16-inch size letters.
   B. Laminate or mount under plexiglass in a neat frame, and install adjacent to the fire alarm control panel. Six additional unframed charts shall be delivered to the Owner.

2.4 AUDIO/VISUAL FIRE ALARM SIGNAL DEVICES:
   A. Shall be electrical supervised, vibrating, horn type, flush mounted at 80' AFF per ADA. Audio devices shall use the ANSI S3.41 Three-Pulse Temporal Code Standard Evacuation Signal.
   B. Unless otherwise shown on the drawings, shall have a nominal rating of 87 dB at ten feet.
   C. Mount on removable adapter plates on conduit boxes.
   D. Audio signals located outdoors shall be weatherproof type with metal housing and protective grille.
   E. Each signal circuit (audio or visual) shall have a minimum of twenty percent spare capacity.
   F. Visual Signal: Shall be integral with the audio signal and shall have translucent white dome with 1/2-inch permanent red letters. Lettering to read "FIRE" and be visible from all viewing directions. Dome to be high impact non-yellowing plastic. Lamps shall be low
voltage type for flashing service with a xenon flasher that meets ADA and UL 1971 requirements. Lamp circuits shall be supervised.

G. Provide all additional devices as required to meet all codes, inspector's requirements and ADA.

H. Strobes shall be synchronized.

I. Strobe intensity shall be per the following:

<table>
<thead>
<tr>
<th>Minimum Required Light Output, Candela (cd) (Effective Intensity)</th>
<th>Two Lights per Room (Located On Opposite Walls) (cd)</th>
<th>Four Lights per Room (One Light per Wall) (cd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Room Size</td>
<td>One Light Per Room (cd)</td>
<td>Opposite Walls (cd)</td>
</tr>
<tr>
<td>20’ x 20’</td>
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<td>180</td>
</tr>
<tr>
<td>100’ x 100’</td>
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<td>-</td>
</tr>
</tbody>
</table>

J. Voice/Tone Notification Appliances (Speakers):

1. Speakers shall comply with UL 1480.
2. Speakers for Voice Notification: Locate speakers for voice evacuation to provide the intelligibility requirements of the "Notification Appliances" and "Emergency Communications Systems" chapters of NFPA 72.
3. Mounting:
   a. Backboxes shall be per manufacturer’s recommendations.
   b. Speakers shall be flush mounted in spaces with ceilings and surface mounted to structure in spaces without ceilings. Provide tile bridge as required.
4. Speaker shall be U.L. Listed for use in fire protective signaling systems.
5. Speakers shall operate on a standard 25V RMS or 70.7V RMS. If using 70V system, Contractor to verify installation requirements with the authority having jurisdiction.
6. Transformers shall be factory installed and tested.
7. Speakers shall be a 4” moisture-proof cone with a frequency response of 400-4000 Hz.
8. Speakers shall produce a minimum UL rated sound pressure level of 84dBA at 10 feet.
9. Metal baffle shall be white. Verify color prior to ordering.

K. Audio Power Amplifiers:

1. Amplifiers shall comply with UL 1711 “Amplifiers for Fire Protective Signaling Systems”.
2. Amplifiers shall be furnished with a self-contained power supply, transformer, and amplifier monitor circuits.
3. Amplifiers shall provide a 25V RMS or 70.7V RMS output. If using 70V system, Contractor to verify installation requirements with the authority having jurisdiction.
4. Provide sufficient amplification to operate all system speakers simultaneously plus 20 percent spare capacity.
5. Provide at least one backup amplifier capable of automatically replacing any failed amplifier. Amplifiers shall automatically transfer to backup units, on primary equipment failure. Test switches on the amplifiers shall be provided to test and observe amplifier backup switchover.

2.5 ADDRESSABLE MANUAL STATIONS:

A. Furnish and install a double action, non-coded, manual fire alarm station, flush mounted.
B. This station shall be connected to a remote interface monitor module as required, for addressable operation. Each module will have an engraved nameplate, acceptable to the engineer, with the same name setup in programming.

C. To operate the station you must push the face panel and manually pull down which in turn activates the associated remote interface monitor module. The face panel locks in the down position providing a positive indication that the station has been operated. The station can be reset to the normal position by the use of a special reset key.

D. The station shall be constructed of a die cast metal or fire retardant polycarbonate, finished in red enamel with raised white lettering. The station shall be jam-proof and shall be surface or semi-flush mountable. The station shall offer a break rod feature which shall not be necessary for station operation.

2.6 SMOKE/HEAT DETECTORS:

A. Addressable Ceiling Smoke Detectors:
   1. Furnish and install as indicated a ceiling mounted photoelectric detector. This detector shall be environmentally compensated, and calibrated and adjusted for sensitivity at the manufacturer's factory to U.L. Standard 268 (Nominal 2.3% per foot smoke obscuration level). Each detector shall utilize solid state components and be equipped with a fully regulated LED light source for long life reliability and an insect screen to minimize nuisance alarms. The detector shall provide a multiple pulse coincidence circuit to minimize false alarms from transient smoke conditions. When the alarm threshold value is exceeded for the first time, the detector shall go into alarm only after at least 2 more consecutive sample pulses have exceeded the alarm threshold values. The detector shall be able to transmit obscuration information to FACP. Detector shall have environmental compensation circuits and shall maintain constant sensitivity even when maintenance required messages are produced.

   2. Either the detector head itself or the detector base shall use magnetic (switchless), binary dippswitches, or rotary decimal (hexadecimal) switches for the assignment of its individual address number when it is being field programmed. It shall also have a data communication line/alarm (flashing/steady) LED and terminals for making data communication line circuit connections. The detector/base assembly shall draw its power from the fire alarm control panel via the data communication line. The detector/base shall flash its LED, to assure communication, as it is being polled for status from the fire alarm control panel and shall report alarm or trouble status changes to it.

   3. Outlet boxes for detectors shall be flush mounted. Each detector will have a label to coordinate with control panel description, acceptable to the engineer, with the same name setup in programming.

   4. Smoke detectors shall not be located within 36" of any air diffuser or sprinkler head.

   5. Provide a remote alarm indicator for each detector located in a concealed location or located where the detector's alarm indicator is not readily visible. Flush mount the remote alarm indicator in the ceiling near the detector.

PART 3 - EXECUTION

3.1 INSTALLATION:

A. Installation shall be in accordance with the NEC, as shown on the drawings, and as recommended by the major equipment manufacturer.

B. Install smoke detector heads not more than two weeks prior to final inspection. Test the detectors in place. Cleaning detectors at the time of final inspection is the contractor's responsibility.

C. Field verify location of area smoke detectors and heat detectors. Do not locate within 36-inches of a HVAC diffuser (supply or return), in a direct air flow, within 36-inches of a sprinkler head, or within 36-inches of the tip of a ceiling fan blade. Smoke detectors for door release shall be located on the centerline of the door and a maximum of 5 feet from the door. The minimum distance from the door is the depth of the wall section above the door, but not less than 12".
A. Normal System Operation: Actuation of any manual station, smoke detector, or water flow switch shall cause the following operations to occur, unless otherwise specified:
   1. Operate the audible/visual signals in the building. Audible devices shall be temporal coded.
   2. Transmit a separate alarm/trouble signal, via phone line to a central monitoring agency.

B. System Supervision: System supervision shall include the following conditions:
   1. Loss of operating or standby power.
   2. A signal ground or open circuit in alarm initiating circuits, alarm indicating circuits, and auxiliarized transmitter trip circuits, and sprinkler and standpipe valve circuits. Each circuit shall have its own supervisory devices.
   3. Off-normal position of sprinkler and standpipe valves.
   4. Battery and battery charger shall have supervision as specified elsewhere in this section.

C. Trouble Signals:
   1. Derangement of any of the above supervised conditions shall be visually and audible annunciated at the fire alarm control panel. Each circuit shall have individual visual annunciation.
   2. Operation of the sprinkler and standpipe valves towards the closed position shall cause a supervisory signal.
   3. Trouble signals shall be retransmitted, via an individual auxiliarized transmitter, to remote locations.

D. One-Way Voice Communication:
   1. The system shall incorporate one-way voice communication and tone generating capabilities.
   2. Voice evacuation message shall be preceded and followed by a minimum of two cycles of the emergency evacuation signal.
      a. Standard emergency evacuation signal shall consist of a three pulse temporal pattern in accordance with NFPA 72.
   3. A central audio control module shall be provided for the necessary alarm message/tone generation, main and remote microphone connections, music inputs, and mixer/pre-amplifier circuits. Dual alarm channels shall permit simultaneous transmission of different announcements to different zones or floors automatically. Continuous circuit supervision shall be provided along with specific information as to the type of failure should a problem occur. Audio control module shall provide up to 30 minutes of message memory for digitally stored messages.
   4. An audio control switch module shall be furnished to provide manual access to audio operations for authorized personnel. The module shall include an “All Circuits” switch, “Aux Tone 1” switch, “Aux Tone 2” switch, tone generator stop switch, and “Audio Trouble Reset” switch. These switches and associated LED indicators shall be supervised for disarrangement or failure.
   5. A handheld, push to talk microphone shall be provided, recessed within a protective panel mounted enclosure. The microphone shall be a noise canceling communication type and shall be equipped with a five foot coiled cable. An LED indicator shall be provided to indicate the microphone push to talk button has been pressed and speaker circuits are ready for transmission. The microphone connection shall be supervised. Activation of manual voice microphone shall automatically silence any existing alarm tones/messages.
   6. Total building evacuation shall be provided to allow to activation of all speakers by means of an “All Circuit” switch.

3.3 TESTS:
A. Provide the service of a competent, NICET certified, factory-trained engineer or technician authorized by the manufacturer of the fire alarm equipment to technically supervise and participate during all of the adjustments and tests for the system. Make all adjustments and tests in the presence of the engineer.
B. When the systems have been completed and prior to the scheduling of the final inspection, furnish testing equipment and perform the following tests in the presence of the engineer. When any defects are detected, make repairs or install replacement components, and repeat the tests until such time that the complete fire alarm system meets all contract requirements. After the system has passed the test and been approved by the engineer, the contractor may request a final inspection. Final acceptance of system will not be made until retested at final inspection.

1. Before energizing the cables and wires, check for correct connections and test for short circuits, ground faults, continuity, and insulation.
2. Test the insulation on all installed cable and wiring by standard methods as recommended by the equipment manufacturer.
3. Run water through all flow switches. Drain the water by hose to the nearest drain. Check to verify whether all codes are coming in clearly and correctly. Check time delay on water flow switches to assure that water surges do not trip transmitters. (Submit a report listing all water flow switch operations and their retard time in seconds.)
4. Open fire alarm station circuits to see if trouble signal actuates.
5. Open audible signal circuits to see if the trouble signal actuates.
6. Ground fire alarm station circuits and verify response of trouble signals.
7. Ground audible signal circuits and verify response of trouble signals.
8. Check transmission of all fire alarm devices.
9. Check installation, supervision, operation and sensitivity of smoke detectors to ascertain that they will avoid false alarm signals and will function as specified. See Article 2.8, SMOKE DETECTORS.
10. Upon completion of Fire Alarm System Testing, submit to engineer one (1) copy of Testing and Inspection Report signed off as 100 percent functioning by the System Supplier and the Electrical contractor. Bind one (1) additional copy in each of the operation and maintenance manuals. A record of completion document, as described in NFPA 72, shall be stored at the fire alarm control panel or other approved location by the AHJ. When not stored at the fire alarm control panel the location of this document shall be identified at the fire alarm control panel. If documents are stored in a separate enclosure or cabinet it shall be prominently labeled “Fire Alarm Documents”. Other documents required to be located at the fire alarm control panel include:
   a. Owner’s manual and manufacturers published instructions covering all system equipment.
   b. Record drawings.
   c. For software based systems, record copy of the site specific software.
   d. Written sequence of operation.

3.4 FINAL INSPECTION:
A. At the final inspection a factory trained representative of the manufacturer of the major equipment shall perform the tests in Article 3.3 TESTS. In addition the representative shall demonstrate that the systems function properly in every respect. The demonstration shall be made in the presence of the Owners Representative.

END OF SECTION 28 31 00