PROJECT MANUAL
Saginaw Public Schools

SAGINAW HIGH SCHOOL &
ARTHUR HILL HIGH SCHOOL -
GYMNASIUM EMERGENCY
LIGHTING

Saginaw Public Schools
550 Millard Street
Saginaw, Michigan  48607-1193

June 3, 2013

Architects – Engineers – Consultants
1475 S. Washington Ave., Saginaw, Michigan  48601
Ph (989) 752-5000                        Fax (989) 752-5002
www.kibbe.com
WAK Proj No.13-1955-0203
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SECTION 00020 - INVITATION TO BID

1.1 GENERAL

A. Owner requests proposals on Work as follows:


2. Project Address: Saginaw High School 3100 Webber St. Saginaw, Michigan

Arthur Hill High school 3115 Mackinaw Saginaw, Michigan

3. Owner: School District of the City of Saginaw Board of Education


5. Sealed Bids Due: By 11:00 am local time, Friday. June 14, 2013

6. Place Due: Purchasing Office 550 Millard Street Saginaw, MI 48607-1193

7. Type of Bidding Classes of Work: Prime Contract for Electrical Trades.

8. In lower corner of envelope, in large bold print: “GYMNASIUMS EMERGENCY LIGHTING” “CONFIDENTIAL - DO NOT OPEN”

9. Pre-bid Meeting: A mandatory pre-bid walkthrough is required for the electrical contractor, Tuesday, June 11, 2013 at 9:00am, at the Saginaw High School Main Entry, Arthur Hill High School will follow.

10. Addenda Addenda can be found at “William Kibbe & Associates” website. Click “Enter Website - Bids/Projects – Current Bids - Saginaw Public Schools Gymnasium Emergency Lighting - Addenda

INVITATION TO BID
B. The Saginaw Public School District is accepting bids for the emergency lighting of Saginaw High School and Arthur Hill High School Gymnasiums. The light fixtures and the emergency battery units were installed under a separate contract but the emergency battery unit not connected. Under this contract the contractor will connect the emergency battery units and provide new switching as shown on the drawings.

C. Withdrawal:

1. Bids may not be withdrawn prior to 30 calendar days after actual date of opening bids.

D. Rejection:

1. Owner reserves the right to waive any informality or to reject any or all bids and to accept any bid deemed most advantageous to the Owner.

E. Bonding:

1. Bid and performance bonds will be required for this project.

F. Final Completion by August 12, 2013.

1.2 PRODUCTS (NOT APPLICABLE)

1.3 EXECUTION (NOT APPLICABLE)

END OF SECTION 00020
INSTRUCTIONS TO BIDDERS

SECTION 00100 - INSTRUCTIONS TO BIDDERS

1.1 GENERAL

A. School District of the City of Saginaw, Board of Education (herein called the “Owner”), invites bids for construction.

B. Bids will be received at place and time indicated in Invitation for Bid.

C. Submit a sealed envelope containing bid and address to:

ATTN: Purchasing Office
550 Millard Street
Saginaw, MI 48607-1193

“GYMNASIUMS EMERGENCY LIGHTING”
“CONFIDENTIAL - DO NOT OPEN”

D. Owner will publicly open and read aloud bids immediately upon receipt of all bids after 11:00 am on the day of bids due.

E. Owner invites Bid on Construction Work to include work of electrical trades. Refer to bid form for specific requirements regarding bids and cost breakdown.

F. Preparation of Bid

1. Submit on forms furnished herein.
2. Fill out in ink or typewritten, without erasure, interlineation or changes.
3. Make Bid in name of principal and if co-partnership, give names of all parties. Give complete address. If bid is submitted by an agent, provide satisfactory evidence of agency authority.
4. Fill in all blank spaces for bid prices in both words and figures. Submit each bid in sealed envelope. Indicate on outside of envelope, name of bidder, bidders address, and name of project for which bid is submitted. If forwarded by mail, enclose sealed envelope containing bid in another envelope addressed indicated.
5. Bid must be received prior to due dated time indicated in Invitation For Bid.

G. Withdrawal or Revision to Bid

1. Bid may be withdrawn or revised prior to scheduled time for opening, under following terms:
a. Bidders may, without prejudice to themselves, withdraw a bid after it has been deposited, provided request for such withdrawal is received in writing or by telegram, before time set for opening. Telephonic communications are not acceptable. After opening, no Bid may be withdrawn for the period indicated.

b. Bidder may modify his bid by written confirmation prior to scheduled time of bid opening. Bidders must have time & date stamp to be valid.

H. Irregular Bids

1. Bids are considered irregular and may be rejected for the following reasons unless otherwise provided by law:
   a. If form furnished is not used or is altered.
   b. If there are unauthorized additions, conditional bids, or irregularities of any kind which may tend to make bid incomplete, indefinite, or ambiguous as to its meaning.
   c. If bidder adds any provisions reserving right to accept or reject any award, or to into contact pursuant to an award.
   d. If unit or lump sum prices contained in bid schedule are obviously unbalanced either in excess of, or below, reasonable cost analysis values.
   e. If bidder fails to insert alternate and unit prices for every item indicated.
   f. If bidder fails to complete bid in any other particulars where information is requested so bid can not be properly evaluated.

2. Owner reserves right to reject any or all bids and to waive irregularities or informalities as may be deemed in Owner’s interest.

I. Interpretations

1. If bidder for proposed work is in doubt as to the true meaning of any part of the contact documents, submit written request for interpretation. Bidder submitting request is responsible for its prompt and actual delivery. Interpretations will not be made orally. The architect is not responsible for any other explanations or interpretations which anyone presumes to make.

2. Written request for interpretation shall be made to William A. Kibbe & Associates, Inc., 1475 S. Washington Ave., Saginaw, Michigan 48601. Project Manager: Philip A. Tanner, P.E., email address: ptanner@kibbe.com. Request must be received AT LEAST 3 DAYS PRIOR to date fixed for opening of bids. All interpretations or
supplemental instructions will be in form of written addenda mailed or emailed prior to date fixed for opening of bids. Copy of such addenda will be mailed to each individual or entity issued contract documents. Failure to receive such addenda does not relieve bidder from any obligation under his bid as submitted. All addenda are part of the contract documents.

3. Bidder desiring approval of material or equipment not specified must comply with Section 00440-Substitutions Prior To Award of Contract.

J. Method of Award

1. Upon receiving notice of acceptance of a bid, contractor will enter into a contract with Owner within five (5) working days.

K. Contractor Qualifications

1. All contractors shall be licensed contractors, possessing good labor relations, capable of performing quality workmanship and working in harmony with other contractors on the job. All work shall be coordinated with the general project work. In the event contractor willfully violates the requirements of this paragraph, Owner shall have the right to order contractor to remove itself, its equipment, and its employees from the job.

1.2 PRODUCTS (NOT APPLICABLE)

1.3 EXECUTION (NOT APPLICABLE)

END OF SECTION 00100
SECTION 00500 - CONTRACT INFORMATION

CONTRACT

The successful bidder shall enter into a contract with School District of the City of Saginaw, Board of Education, to provide the services listed within this Request for Proposal. The contact form shall be AIA Document A101, Standard Form Between Owner and Contractor Stipulated Sum - 2007 edition. The contractor is required to provide on the proposal form their Guaranteed Maximum Price with a fee percentage indicated for all work provided.

GENERAL AND SUPPLEMENTAL CONDITIONS

The general conditions for this project shall be AIA Document A201, General Conditions of the Contract for Construction - 2007 edition. Contact the engineer for copies of this document. Supplemental conditions are as follows:

CONTRACTORS INSURANCE

The Contractor shall not commence work under this contract until he/she has obtained all the insurance required under this paragraph and such insurance has been approved by the Owner, nor shall the contractor allow any subcontractor to commence work on his/her subcontract until all similar insurance required of the subcontractor has been so obtained and approved:

A. Workers Compensation Insurance - The Contractor shall maintain during the life of the contract, Worker's Compensation Insurance for all employees and in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Workers' Compensation insurance for all the latter's employees. In case any class of employees engaged in hazardous work under this contract is not protected under Workers' Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate insurance coverage for the protection of employees not otherwise protected.

B. Comprehensive General Liability / Property Damage / Bodily Injury: The Contractor shall maintain during the life of the Contract, Comprehensive General Liability and Property Damage insurance as shall protect Contractor and any subcontractors performing work covered by this contract, from claims for damages for personal injury, including accidental death, from claims for property damages, which may arise from operations under this contract, whether such operations be by Contractor or any subcontractor or anyone directly or indirectly employed by either of them and the amounts of such insurance shall be as follows:

1. Bodily Injury Liability: In an amount not less than $1,000,000 for injuries, including death, to any one person, and, subject to...
the same limit for each person, in an amount not less than $2,000,000 on account of one accident; and Property Damage Insurance in an amount not less than $1,000,000.

The Contractor shall require subcontractors to be protected under the Contractor's Insurance policies, to take out and maintain insurance of such nature in the same amounts.

2. **Owner's Protective Liability And Property Damage Insurance:** Naming Saginaw Public Schools, and all officials, and agents, for the same amounts listed above.

3. Provide umbrella coverage up to $5,000,000 coverage on all policies.

C. **Proof of Carriage Of Insurance:** The Contractor shall furnish the Owner with proof of insurance in the amounts listed above.

**EXISTING CONDITIONS**

Before submitting a proposal, the Contractor shall visit the site, examine its conditions, including adjacent properties, and become thoroughly acquainted with its obstacles and advantages before performing the work. The Contractor shall also study the drawings explanatory of the contract and compare the same with the information gathered by the examination of the site, as no extra charge will be allowed for extra work caused by unfamiliarity with the site and the drawings.

**TAXES, PERMITS, AND FEES**

Each proposal submitted shall include, and the contractor shall pay, all taxes which are levied by federal, state, or municipal government on labor and the materials entering into the work.

**ADDENDA**

All addenda issued to Contractors prior to date of receipt of proposals shall become a part of this proposal, and all proposals are to include the work therein described. Each proposal submitted shall list all addenda, which have been received prior to the time scheduled for receipt of proposals.

**NOTICE OF AWARD**

The Owner reserves the right to reject any or all proposal and/or waive any defects or irregularities in proposals. Award of a contract, if made will be made to the Contractor whose proposal is in the best interest of the Owner in its sole discretion. The Owner also reserves the right to negotiate changes to the proposals, specifications or other matters pertaining to the construction proposal that are deemed desirable by the Owner. The successful contractor must enter into Construction Agreement as defined in these documents.
EQUAL OPPORTUNITY
That no otherwise qualified person shall be excluded from participation in, be denied
the benefits of, or be subject to discrimination in or activities of the contractor on the
basis of race, color, national origin, religion, age, sex, marital status, physical or
mental handicap, as required by law.

That no employee or applicant for employment shall be subjected to discrimination
with respect to hiring, recruitment, advancement or discharge or in the terms
conditions, or privileges of employment, or a matter directly or indirectly related to
employment because of religion, race, color, national origin, age, sex, height, weight,
marital status, record of arrest without conviction, or physical or mental handicap, as
required by law.

PREVAILING WAGE POLICY
No contract, sub-contract, agreement, understanding or other arrangement, whether
oral or written, between outside contractor(s) and/or sub-contractor and the School
District for the construction or remodeling of any building, or part thereof that exceeds
$2,000 and involving craftsmen, mechanics, laborers, asphalt pavers or masonry
contractors employees directly upon the site of work, shall be entered into, approved
or executed, unless such contract, sub-contract, agreement, understanding or
arrangement shall provide and require that all craftsmen, mechanics, laborers, pavers
or masons so employed shall receive not less than the wage and fringe benefit rates
prevailing in the locality in which the work is to be performed for corresponding
classes of workers.

Such contract, sub-contract, agreement, understanding or arrangement between said
outside contractor(s) and the School District shall provide that the contractor(s) and/or
sub-contractor(s) engaged in performances of service or work for the School District,
to which this policy applies, shall, at the request of the Board, Superintendent, or his
designee, furnish proof satisfactory to the Board that the prevailing wages and fringe
benefits are being paid.

Above listed projects financed, in part or whole, with Federal funds shall fall under the
Federal prevailing wage laws for craftsmen, mechanics and laborers as determined
under the Davis Bacon Act and published by the United States Department of Labor
for the area.

Any contractor refusing to comply with this policy or refusing to provide satisfactory
documentation of compliance with this policy will be removed from the eligible
bidders’ list. Contractors shall be responsible for the compliance of their sub-
contractors. Thus, if a sub-contractor refuses to comply with this policy and/or refuses
to provide satisfactory documentation of compliance with this policy, the contractor
and sub-contractor will be removed from the eligible bidder’s list.
CONTRACT PAYMENTS
Contract payments for this project will be made monthly utilizing standard A.I.A. forms. Final payment will not be released until all work is satisfactorily performed.

FAILURE TO EXECUTE CONTRACT
Failure on the part of the successful Contractor to execute a contact and file satisfactory bonds, as provided herein may be considered cause for the annulment of the award and forfeiture of the proposal guaranty to the Owner.

PATENTED PROCESSES AND MATERIALS
The Contractor shall defend any and all patent infringement suits resulting form the use of any design, device, material or process employed in the construction of any work provided for on the plans, and he/she shall save harmless and indemnify the Owner on account of such suits or claims or royalties.

POST PROPOSAL INFORMATION
Prior to execution of the contract, the successful vendor shall submit the following information:
1. A list of names of the subcontractors who will be working on this project.
2. All bonds and certificates of insurance as required by this contract.

CONTRACTOR’S RESPONSIBILITY
It is required that each contractor will examine the contents of the Request for Proposal and construction documents and shall exercise his own judgment as to the nature and amount of the work to be done.

Contractors are cautioned not to submit proposals until having personally examined the site of the proposed work and its surroundings. They shall further investigate and obtain information concerning the facilities available for receiving, transporting, handling and storing equipment and materials.

No plea of ignorance of conditions that exist will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill all the requirements of the contract.

CONSTRUCTION CODES
All work on this contract shall be in strict compliance with local Building, Mechanical, Plumbing, Electrical, Fire, Barrier Free and other applicable codes. This includes compliance with the Americans with Disabilities Act (ADA) Work completed under this contract is to conform to all Federal, State and local building codes, e.g. IBC, and MBC and meet Federal and State standards for a certificate of occupancy to be issued (c.o.). Contractor shall assure all local building codes and regulations are complied with. No extra project costs will be allowed after the contract is awarded with respect to compliance to construction codes.
PROTECTION
Contractor shall protect all other work, fixtures, facilities and finishes from damage due to his operation and shall repair any damage in a manner acceptable to the owner. The contractor will, at all times, provide protection against the weather, rain, wind, storms, etc., so as to maintain all work, materials, construction site free from injury or damage. No extra costs or charges will be allowed for winter construction conditions.

SAFETY REGULATIONS
The Contractor and subcontractors shall comply with the Safety Rules and Regulations of the Associated General Contractors of America, the Occupational Safety and Health Standards of the Federal Government and the General Safety Rules and Regulations for the Construction Industry, State of Michigan, Department of Labor, for the protection of workmen on this project.

All equipment and work shall conform to the requirements of the Occupational Safety and Health Act and Michigan Department of Labor Occupational Safety Standards, as amended.

RIGHT TO KNOW
Contractor is to furnish the Owner with material Safety Data Sheets for all chemicals or chemical compounds used in any application on this contract prior to installing or applying same.

ON-SITE STORAGE
The Contractor shall store materials and equipment only at those locations as approved by the Owner.

LAWS TO BE OBSERVED
The Contractor is required to be familiar with all laws, ordinances and regulations which may in any manner affect the equipment or materials used in the proposed construction, those employed on the work or the conduct of the work, and he shall save harmless and indemnify the Owner and his representatives against any claim arising from violation thereof. All work completed under this contract, must meet Michigan Barrier Free Design Code as well as Federal ADA requirements. Check plans and specs for specific information and contact the Architect if you have any questions.

QUALIFICATIONS FOR EMPLOYMENT
No person under the age of sixteen (16) years, and no person currently serving sentence in a penal correctional institution shall be employed to perform any work on the project under this contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health and safety of others shall be employed to perform any work on the project under this contract, provided that this sentence shall not operate against the employment of physically handicapped persons, otherwise employable, where such persons may be safely
assigned to work which they can ably perform. There shall be no discrimination because of race, creed, color, national origin or political affiliations in the employment of persons for work on the project under this contract.

NON-DISCRIMINATION

Except as specifically provided above, workers who are qualified by training and experience and who, as above outlined, are referred for any work on the project under this contract, shall not be discriminated against on any grounds whatsoever.

CONTRACTOR'S ORGANIZATION

The Contractor shall give his personal supervision to the faithful prosecution of the work and in case of his absence shall have a competent, experienced and reliable foreman or superintendent, acceptable to the Owner on the site who shall follow without delay all instructions of the Owner or his assistants in the prosecution and completion of the work and every part thereof, in full authority to supply men, materials and labor, immediately. He shall keep on hand at all times copies of the Contract Documents.

MATERIALS AND WORKMANSHIP

The Contractor shall furnish suitable tools and equipment and employ competent labor to perform the work to be done. Any labor or tools or equipment that shall not, in the judgment of the Owner, be suitable or competent to produce the desired results may be ordered from the work by him.

When required by the specifications, or when called for by the Owner, the Contractor shall furnish the Owner for approval full information concerning the materials which he contemplates incorporating in the work. Samples of materials shall be submitted for approval when so directed. Work under this contract must be in accordance with standard industry practice and definitions. All workmanship to be neat, plumb, square, properly aligned and per accepted standards, if not specified. All work required for the proper completion of all construction under this contract not specifically covered in the drawings and specs will be performed in a manner considered good practice of the specific trade. Materials furnished by the Contractor which shall not, in the judgment of the Owner, be equal to the requirements of the plans or specifications, may be rejected by the Owner, and such rejected materials shall not be used, but shall be immediately removed by the Contractor from the site of the work.

INSPECTIONS

All inspections shall be made on conformance of work to the contract documents, and to acceptable standards of the construction industry. Contractor and Owner shall maintain a list of deficiencies resulting from such inspections for further work and correction.
DISORDERLY EMPLOYEES
Disorderly, intemperate or incompetent persons must not be allowed upon the work.

CLEANING UP
The Contractor shall, at all times, keep the premises free from accumulations of waste material or rubbish caused by his employees or work. Upon completion of the actual work of construction, the Contractor shall cleanup and leave all the premises which he has occupied during the construction period in a neat and debris free condition. Before the time of the final payment, the Contractor shall remove from the premises all surplus excavation, debris and rubbish and all unused materials, together with all tools and equipment, or shall deposit them at such points and in such a manner as the Owner may require. The contractor shall remove from the premises all surplus building materials and rubbish, and leave living spaces in clean condition at the completion of the work. Completion of work shall include washing of all new glass, doors and general clean up as required.

DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS
Hazardous or toxic materials may exist where there is no reason to believe they could or should be present. The Contractor and the Owner agree that the discovery of unanticipated hazardous or toxic materials constitutes a changed condition mandating a re-negotiation of the scope of work or termination of services. The Contractor agrees to notify the Owner as soon as practically possible should unanticipated hazardous materials or suspected hazardous materials are encountered. The Contractor agrees to waive any claim against the Engineer, and agrees to indemnify, defend and hold the Owner and Engineer harmless from any claim or liability for injury or loss arising from the encounter of unanticipated hazardous or toxic materials or suspected hazardous or toxic materials.

TEMPORARY ENCLOSURES/ENTRANCES
Contractor shall erect and maintain all temporary enclosures as required to protect the building interior during all periods when construction is underway. The building will be occupied throughout the construction period. All entrances and exits must be maintained.

ACCEPTANCE, FINAL PAYMENT AND WARRANTY
The final payment shall be payable on the approval and acceptance of the work by the Architect, and his recommendations there of and its acceptance by the Owner. Contractor shall warrantee all materials and workmanship (installation) for one year from the date of project completion (final payment). Final payment by the Owner and acceptance by the Contractor waives any future claims by the Contractor or his suppliers for services performed or materials furnished.

TEMPORARY CONTRACTOR HOUSING - JOB TRAILER
If a job trailer is utilized, the contractor will reimburse the Owner for all utility costs associated with the operation. Location on site will be coordinated with the Owner.
MISCELLAENOUS

1. The Owner assumes no liability for any losses suffered by any contractor (i.e. tools, toolboxes, equipment, etc.) as a result of theft or damage.

2. Contractors must not interfere with or cause any disruption of the Owner’s business activities during the course of construction except as specifically defined and agreed upon with the Owner.

3. Contractors must provide their own telephone services as well as providing for restroom facilities.

4. Contractors must not interfere with employee’s ability to park vehicles, nor cause disruption of traffic needs of the company.

END OF SECTION 00500
I, ________________________________, having examined these specifications and having submitted in writing any deviations from the specifications and included all required documentation and attachments, hereby submits the following proposal for consideration:

Base Bid:
Saginaw High School & Arthur Hill High School – Gymnasium Emergency Lighting

$_____________________________

Received Addenda ___________________, ___________________, ___________________

AUTHORIZED SIGNATURE ____________________________________________________

VENDOR NAME ______________________________________________________________

REPRESENTATIVE____________________________________________________________

ADDRESS ____________________________________________________________________

TELEPHONE _________________________________ FAX ___________________________

EMAIL _______________________________________________________________________

PROPOSAL FORM

Page 1 of 2

Section 00550
Sworn and Notarized Familial Disclosure Statement

The undersigned, the owner or authorized officer of ____________________________ (the “Bidder”), hereby represents and warrants except as provided below, that no familial relationships exist between the owner or any employee of the bidder and any member of the Board of Education or the Superintendent of the School District of the City of Saginaw.

☐ The following are the familial relationship(s)

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☐ There are no familial relationships that exist between the owner or employee(s) of the Bidder.

BIDDER:

_____________________________________
By: __________________________________
Printed Name & Title: ____________________________

STATE OF MICHIGAN )
COUNTY OF _____________ )ss.

Subscribed and sworn before me, this ________
day of _________________, 20____, in and for
________________________ County, Michigan
by __________________________
(Signature) NOTARY PUBLIC
My Commission Expires ____________________________
SECTION 00600 - CONSTRUCTION BOND FORMS

The Owner has indicated an intention to use AIA Document A311 “Construction Bond Form” and “Labor and Materials Payment Bond Form” as part of the Contract Documents for this Work.
SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work shall consist of wiring the emergency lighting battery units that are in existing fixtures to a circuit as shown. Also provide new switching so that lights can be controlled with a wall switch. The instruction manual for wiring of the battery unit is attached on the specifications.

1. Project                    Saginaw High School  
Location(s): 3100 Webber St.      Saginaw High School  
              Saginaw, Michigan

2. Owner:       School District of the City of Saginaw  
Facilities Department 
550 Millard Street 
Saginaw, Michigan


C. The Work consists of selective demolition, as indicated on the Drawings.

D. The Work will be constructed under a single electrical prime contract.

1.3 CONTRACTOR USE OF PREMISES

A. General: During the construction period the Contractor shall have full use of the premises for construction operations, including use of the site. The Contractor's use of the premises is limited only by the Owner's right to perform work or to retain other contractors on portions of the Project.
B. **Protection of the Gymnasium floors:** The contractor is responsible to protect the new wood floors and paint. The contractor shall plan for ¾” plywood under all wheels of lifts and cloth or rubber matts between plywood and flooring.

C. **Use of the Site:** Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

   1. **Owner Occupancy:** Allow for Owner occupancy and use by the public.
   2. **Driveways and Entrances:** Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

D. **Use of the Existing Building:** Maintain the existing building in a weathertight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.

1.5 **OCCUPANCY REQUIREMENTS**

   A. **Full Owner Occupancy:** The Owner will occupy the site and existing building during the entire construction period. Cooperate with the Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with the Owner's operations.

   B. **General Contractor shall construct one-hour rated temporary dust partitions as required to secure the work area from the building occupants, and to prevent the migration of dust and debris from the premises. All such partitions which contain doors shall be securely locked to prevent unauthorized entry, and shall not impede any required means of egress pathways to exits. Minimum corridor width of six feet (clear) shall be maintained at all times at the existing corridor adjacent to the construction. All such temporary partitions shall be removed as soon as practicable, and the existing affected areas and surfaces restored to their original condition.**

**PART 2 - PRODUCTS (Not Applicable)**

**PART 3 - EXECUTION**

**END OF SECTION 01010**

**SUMMARY OF WORK**
SECTION 01027 - APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.

B. This Section specifies administrative and procedural requirements governing each prime contractor's Applications for Payment.

1. Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule, Submittal Schedule, and List of Subcontracts.

C. Related Sections: The following Sections contain requirements that relate to this Section.

1. Schedules: The Contractor's Construction Schedule and Submittal Schedule are specified in Division 1 Section "Submittals."

1.3 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.

1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.

B. Payment-Application Times: Each progress-payment date is indicated in the Agreement. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.

C. Payment-Application Times: The date for each progress payment is the 15th day of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 15 days prior to the date for each progress payment.

D. Payment-Application Forms: Use AIA Document G702 and Continuation Sheets G703 as the form for Applications for Payment.
E. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. The Owner will return incomplete applications without action.

1. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

F. Transmittal: Submit (3) three signed and notarized original copies of each Application for Payment to the Owner by a method ensuring receipt within 24 hours. One copy shall be complete, including waivers of lien and similar attachments, when required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Architect.

G. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:

1. List of subcontractors.
2. List of principal suppliers and fabricators.
3. Contractor's Construction Schedule (preliminary if not final).
5. Schedule of unit prices.
6. Submittal Schedule (preliminary if not final).
7. List of Contractor's principal consultants.
10. Initial progress report.
12. Certificates of insurance and insurance policies.
13. Performance and payment bonds
14. Data needed to acquire the Owner’s insurance.
15. Initial settlement surveys and damage report, if required.

H. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment.

1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
2. Administrative actions and submittals that shall precede or coincide with this application include:
   a. Occupancy permits and similar approvals.
   b. Warranties (guarantees) and maintenance agreements.
c. Test/adjust/balance records.

d. Maintenance instructions.

e. Startup performance reports.

f. Changeover information related to Owner's occupancy, use, operation, and maintenance.

g. Final cleaning.

h. Application for reduction of retainage and consent of surety.

i. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.

I. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:

1. Completion of Project closeout requirements.

2. Completion of items specified for completion after Substantial Completion.

3. Ensure that unsettled claims will be settled.

4. Ensure that incomplete Work is not accepted and will be completed without undue delay.

5. Transmittal of required Project construction records to the Owner.

6. Certified property survey.

7. Proof that taxes, fees, and similar obligations were paid.

8. Removal of temporary facilities and services.


PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01027
SECTION 01035 - MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for handling and processing contract modifications.

1. Multiple Prime Contracts: Provisions of this Section apply to the work of each prime contractor.

1.3 MINOR CHANGES IN THE WORK

A. The Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or Contract Time, on AIA Form G710, Architect's Supplemental Instructions.

1.4 CHANGE ORDER PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: The Architect will issue a detailed description of proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Proposal requests issued by the Architect are for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.

2. Within 7 calendar days of receipt of a proposal request, submit an estimate of cost necessary to execute the change to the Architect for the Owner's review.
   a. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
   b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
   c. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.

B. Contractor-Initiated Proposals: When latent or unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.
1. Include a statement outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.

2. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.

3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

4. Comply with requirements in Section "Product Substitutions" if the proposed change requires substitution of one product or system for a product or system specified.


D. Proposal Request Form: Use forms provided by the Owner for Change Order Proposals. Sample copies are included at the end of this Section.

1.5 ALLOWANCES

A. Allowance Adjustment: For allowance-cost adjustment, base each Change Order Proposal on the difference between the actual purchase amount and the allowance, multiplied by the final measurement of work-in-place. Where applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.

1. Include installation costs in the purchase amount only where indicated as part of the allowance.

2. When requested, prepare explanations and documentation to substantiate the margins claimed.

3. Submit substantiation of a change in scope of work claimed in the Change Orders related to unit-cost allowances.

4. The Owner reserves the right to establish the actual quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or the Contractor's handling, labor, installation, overhead, and profit. Submit claims within 21 days of receipt of the Change Order or Construction Change Directive authorizing work to proceed. The Owner will reject claims submitted later than 21 days.

1. Do not include the Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has
changed from what could have been foreseen from information in Contract Documents.

2. No change to the Contractor's indirect expense is permitted for selection of higher or lower-priced materials or systems of the same scope and nature as originally indicated.

### 1.6 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: When the Owner and the Contractor disagree on the terms of a Proposal Request, the Architect may issue a Construction Change Directive on AIA Form G714. The Construction Change Directive instructs the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. The Construction Change Directive contains a complete description of the change in the Work. It also designates the method to be followed to determine change in the Contract Sum or Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

### 1.7 CHANGE ORDER PROCEDURES

A. Upon the Owner's approval of a Proposal Request, the Architect will issue a Change Order for signatures of the Owner and the Contractor on AIA Form G701.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01035
SECTION 01040 - COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:
   1. General project coordination procedures.
   2. Conservation.
   3. Coordination Drawings.
   4. Administrative and supervisory personnel.
   5. Cleaning and protection.

1.3 COORDINATION

A. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.
   1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
   2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
   3. Make provisions to accommodate items scheduled for later installation.

B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
   1. Prepare similar memoranda for the Owner and separate contractors where coordination of their work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
   1. Preparation of schedules.
2. Installation and removal of temporary facilities.
3. Delivery and processing of submittals.
4. Progress meetings.
5. Project closeout activities.

D. Conservation: Coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water, and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work.

1.4 SUBMITTALS

A. Coordination Drawings: Prepare coordination drawings where careful coordination is needed for installation of products and materials fabricated by separate entities. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components.
1. Show the relationship of components shown on separate Shop Drawings.
2. Indicate required installation sequences.
3. Comply with requirements contained in Section "Submittals."

B. Staff Names: Within 7 calendar days of commencement of construction operations, submit a list of the Contractor's principal staff assignments, including the superintendent and other personnel in attendance at the Project Site. Identify individuals and their duties and responsibilities. List their addresses and telephone numbers.

1. Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.2 CLEANING AND PROTECTION
A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.

B. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.

C. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

1. Excessively high or low temperatures.
2. Thermal shock.
3. Excessively high or low humidity.
4. Air contamination or pollution.
5. Water or ice.
7. Chemicals.
8. Light.
11. Soiling, staining, and corrosion.
12. Bacteria.
13. Rodent and insect infestation.
15. Misalignment.
16. Excessive weathering.
17. Unprotected storage.
18. Improper shipping or handling.
19. Theft.
20. Vandalism.

END OF SECTION 01040
DIVISION 26000 - ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
   A. Drawings and general provisions of the contract, including general and supplementary conditions and division 1 specification sections, apply to this section.

1.2 SUBMITTALS
   A. Product data for:
      1. Wiring devices.
      2. Lighting fixtures.
      3. Power distribution equipment.

1.3 QUALITY ASSURANCE
   A. Electrical components, devices, and accessories: listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
   B. Comply with UL 467 for grounding and bonding materials and equipment.
   C. Comply with NFPA 70.
   D. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.
   E. Comply with applicable portions of NECA 1, NEMA pb 1.1, and NEMA PB 2.1 for installation of enclosed switches and circuit breakers.
   F. Source limitations: Obtain each type of product, equipment, and wiring device and associated wall plate through one source from a single manufacturer. Insofar as they are available, obtain all products, equipment, and wiring devices and associated wall plates from a single manufacturer and one source.

1.4 COORDINATION
   A. Coordinate arrangement, mounting, and support of electrical equipment:
      1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
      2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
      3. To allow right of way for piping and conduit installed at required slope.
      4. So connecting raceways, cables, wireways, and busways will be clear of obstructions and of the working and access space of other equipment.
   B. Coordinate location of access panels and doors for electrical items that are behind finished surfaces or otherwise concealed. Access doors and panels are specified in division 8 section "access doors and frames."

PART 2 - PRODUCTS

2.1 RACEWAYS AND WIREWAYS
   A. Raceway materials:
      1. EMT: ANSI C80.3.
2. Fittings for conduit (including all types and flexible and liquidtight), emt, and cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.
6. Hinged-cover enclosures: NEMA 250, Type 1, with continuous-hinge cover with flush latch,
7. Metal enclosures: steel, finished inside and out with manufacturer's standard enamel.
8. Cabinets:
   A. NEMA 250, Type 1, galvanized-steel box with removable interior panel and removable
   B. Hinged door in front cover with flush latch and concealed hinge.

2.2 CABLES AND WIRING MATERIALS
   A. Conductor insulation: comply with NEMA WC 70 for types THW, THHN-THWN, and XHHW.
   B. Multiconductor cable: Comply with NEMA WC 70 for metal-clad cable, Type MC with ground wire.
   C. Branch Circuits: Copper. Stranded for No. 10 AWG and larger.

2.3 IDENTIFICATION MATERIALS
   A. Color-coding conductor tape: colored, self-adhesive vinyl-tape not less than 3 mils thick by 1 to 2 inches wide.
   B. Marker tapes: vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.
   C. Self-adhesive, engraved, laminated acrylic or melamine label: adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch (10 mm).

2.4 WIRING DEVICES
   A. Provide products by one of the following manufacturers:
      1. Cooper wiring devices; a division of cooper industries, inc.
      2. Hubbell incorporated; wiring device-kellems
      4. Pass & seymour/legrand; wiring devices & accessories.
   B. Snap switches: comply with NEMA WD 1 and UL 20, 120/277 V, 20 A
   C. Wall plates: single and combination types to match corresponding wiring devices.
      1. Plate-securing screws: metal with head color to match plate finish.
      2. Material: Stainless Steel 304

PART 3 - EXECUTION

3.1 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION
   A. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.
   B. Right of way: Give to piping systems installed at a required slope.
3.2 GROUNDING APPLICATIONS
A. Install insulated equipment grounding conductors with all feeders and branch circuits. Insulation shall be rated at 600V or as approved by authority having jurisdiction.
B. Conductors: Stranded conductors for no. 10 AWG and larger, unless otherwise indicated.

3.3 APPLICATION OF IDENTIFICATION SYSTEMS
A. Power-circuit conductor identification: for secondary conductors no. 1/0 awg and larger in pull and junction boxes use color-coding conductor tape. Identify source and circuit number of each set of conductors. For single conductor cables, identify phase in addition to the above.
B. Branch-circuit conductor identification: where there are conductors for more than three branch circuits in same junction or pull box, use color-coding conductor tape. Identify each ungrounded conductor according to source and circuit number.
C. Equipment identification labels: on each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and operation and maintenance manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification.
1. Labeling instructions:
   A. Indoor equipment: adhesive film label. Unless otherwise indicated, provide a single line of text with 1/2-inch- (13-mm-) high letters on 1-1/2-inch- (38-mm-) high label; where 2 lines of text are required, use labels 2 inches (50 mm) high.
   D. Verify identity of each item before installing identification products.
   E. Location: install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
   F. Apply identification devices to surfaces that require finish after completing finish work.
   G. Self-adhesive identification products: clean surfaces before application, using materials and methods recommended by manufacturer of identification device.
   H. Color-coding for phase and voltage level identification, 600 v and less: use the colors listed below for ungrounded service, feeder, and branch-circuit conductors.
      1. Color shall be field applied for conductors over no. 10 AWG.
      2. Colors for 208/120-V circuits:
         A. Phase A: black.
         B. Phase B: red.
         C. Phase C: blue.

3.4 RACEWAY APPLICATION
A. Comply with the following indoor applications, unless otherwise indicated:
   1. Exposed, not subject to physical damage: EMT.
   2. Concealed in ceilings and interior walls and partitions: EMT.
   3. Connection to vibrating equipment (including transformers and hydraulic, pneumatic, electric solenoid, or motor-driven equipment): FMC, except use LFMC in damp or wet locations.

B. Comply with NECA 1 for installation requirements applicable to products specified in part 2 except where requirements on drawings or in this article are stricter.
C. Minimum raceway size: 3/4-inch trade size.
D. Comply with NECA 1 for installation requirements applicable to products specified in part 2 except where requirements on drawings or in this article are stricter.
E. Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

F. Complete raceway installation before starting conductor installation.

G. Support raceways per NEC – NFPA-70.

H. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed.

I. Conceal conduit and EMT within finished walls, ceilings, and floors, unless otherwise indicated.

J. Flexible conduit connections: use maximum of 72 inches of flexible conduit for recessed and semirecessed lighting fixtures, equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

3.5 INSTALLATION OF POWER CONDUCTORS AND CABLES

A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.

B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

D. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

E. Identify and color-code conductors and cables according to division 16 section "electrical identification."

F. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

G. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

H. Wiring at outlets: install conductor at each outlet, with at least 12 inches (300 mm) of slack.

3.6 WIRING DEVICE INSTALLATION

A. Replace all devices that have been in temporary use during construction or that show signs that they were installed before building finishing operations were complete.

B. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.

C. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.

D. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.

E. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, 2/3 to 3/4 of the way around terminal screw.

F. Use a torque screwdriver when a torque is recommended or required by the manufacturer.

G. When conductors larger than no. 12 awg are installed on 15- or 20-a circuits, splice no. 12 awg pigtails for device connections.

H. Tighten unused terminal screws on the device.

I. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.

J. Device plates: do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.
K. Arrangement of devices: unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

3.7 FIELD QUALITY CONTROL

A. Prepare for acceptance tests as follows:
1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
2. Test continuity of each circuit.

B. Perform the following field tests and inspections and prepare test reports:
1. Perform each electrical test and visual and mechanical inspection stated in NETA ATS, Section 7.5 for switches and Section 7.6 for molded-case circuit breakers. Certify compliance with test parameters.
2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed, including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. CAUTION – To prevent electrical shock, do not mate unit connector until installation is complete and A.C. power is supplied to the unit.

2. CAUTION – This fixture provides more than one power supply output source. To reduce the risk of electrical shock, disconnect both normal and emergency sources by turning off the A.C. branch circuit and by disconnecting the unit connector.

3. CAUTION – This is a sealed unit. The integral, high temperature Ni-Cad battery is not replaceable. Replace the entire unit when necessary and recycle or dispose of the nickel-cadmium battery properly.

4. DO NOT USE OUTDOORS. The ISL-540 is for use with grounded, UL Listed, damp location rated, indoor fixtures. Not for use in heated air outlets or hazardous locations.

5. The ISL-540 requires an unswitched A.C. power source of either 120 or 277 volts. Properly cap the unused A.C. lead.

6. Do not mount near gas or electric heaters.

7. The ISL-540 should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.

8. The ISL-540 will cold strike and operate for 90 minutes one 2’ to 4’ T5, one 27W-46W T6, or one 17W-40W T8 linear lamp, including HO and 4-pin long compact fluorescent lamps, from 36 through 55 watts.

9. The ISL-540 is compatible with all A.C. magnetic and electronic ballasts including multiple lamp ballasts with one lamp operating in the emergency mode.

10. Suitable for use in damp locations.

11. For use in 0° C minimum, 50° C maximum ambient temperatures.

12. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.

13. Do not use this equipment for other than intended use.

14. Install in accordance with the National Electrical Code and local regulations.

15. Installation and servicing should be performed by qualified personnel.

16. Lighting fixture manufacturers, electricians, and end-users need to ensure product system compatibility before final installation.

SAVE THESE INSTRUCTIONS
INSTALLATION INSTRUCTIONS

CAUTION: Before installing, make certain the A.C. power is off and the ISL-540 unit connector is disconnected.

1. MOUNTING THE ISL-540
   Remove the ballast channel cover. Mount the ISL-540 in the ballast channel at least 1/2” away from the A.C. ballast(s).

   When battery packs are remote mounted, consult Customer Service for the maximum allowable distance between the battery pack and the lamp.

2. WIRING
   Refer to the wiring diagrams on the back page for the appropriate wiring of lamp(s) and ballast. Install in accordance with the National Electrical Code and local regulations. For additional wiring diagrams consult Customer Service.

3. INSTALLING THE CHARGE INDICATOR
   Select a convenient location on the side of the fixture so the Charge Indicator can be seen after installation. Allow for proper clearance inside the fixture and drill or punch a 1/2” hole. Snap the 1/2” white bushing into the hole. Push the LED housing into the bushing and secure it in place with the 5/8” black bushing (see Illustration 1). Connect the LED red and white wires to the ballast LED marked wires.

Illustration 1

4. INSTALLING THE TEST SWITCH
   The Test Switch should be mounted on the side of the fixture, preferably adjacent to the Charge Indicator. Drill or punch a 1/2” mounting hole.

5. WIRING THE A.C. INPUT
   A. The ISL-540 and A.C. ballast must be on the same branch circuit.
   B. The ISL-540 requires an unswitched A.C. power source of either 120 or 277 volts. Select the proper voltage lead and cap the unused lead.
   C. When the ISL-540 is used with a switched fixture, the A.C. input to the ISL-540 must be connected ahead of the fixture switch. Refer to Illustration 2 for switched and unswitched fixture wiring diagrams.
6. LABELS
Attach the appropriate labels adjacent to the Test Switch and Charge Indicator. Annotate Re-lamping label for lamp type and wattage. The Caution and the Re-lamping labels must be on the fixture in a readily visible location to anyone attempting to service the fixture.

7. COMPLETING INSTALLATION
When the installation is complete, switch the A.C. power on and join the ISL-540 unit connector.

OPERATION

Normal Mode – A.C. power is present. The A.C. ballast operates the fluorescent lamp(s) as intended. The ISL-540 is in the standby charging mode. The Charge Indicator will be lit providing a visual indication that the battery is being charged.

Emergency Mode – The A.C. power fails. The ISL-540 senses the A.C. power failure and automatically switches to the Emergency Mode. One lamp is illuminated, at reduced output, for a minimum of 90 minutes. When the A.C. power is restored, the ISL-540 switches the system back to the Normal Mode and resumes battery charging. See page 1 of the Instruction Manual.

TESTING & MAINTENANCE

Pressing the Test Switch turns off the light on the Charge Indicator and forces the unit into emergency mode, interrupting power to the designated A.C. ballast. The emergency lamp is now being lit by the ISL-540 unit. After releasing the Test Switch, the fixture returns to normal operation after a momentary delay. To simulate a “BLACK OUT” use the circuit breaker to turn off A.C. power.

Initial Testing – Allow the unit to charge approximately 1 hour, then conduct a short discharge test. Allow a 24 hour charge before conducting a one hour test.

The ISL-540 is a maintenance free unit, however, periodic inspection and testing is required. NFPA 101, Life Safety Code, outlines the following schedule:

Monthly – Insure that the Charge Indicator light is illuminated. Conduct a 30 second discharge test by depressing the Test Switch. One lamp should operate at reduced output.

Annually – Insure that the Charge Indicator is illuminated. Conduct a full 1½ hour discharge test. The unit should operate as intended for the duration of the test.

“Written records of testing shall be kept by the owner for inspection by the authority having jurisdiction.”

SERVICING SHOULD BE PERFORMED BY QUALIFIED PERSONNEL.
Consult Customer Service or visit www.iotaengineering.com for current warranty information.
TYPICAL WIRING DIAGRAMS

For wiring diagrams of ballasts not shown, consult our Customer Service.

Wiring and Troubleshooting Tips are available on-line at http://www.iotaengineering.com/wiringtips.pdf

1. ONE LAMP RAPID START BALLAST

2. TWO LAMP RAPID START BALLAST

3. TWO LAMP RAPID START BALLAST

4. THREE LAMP RAPID START BALLAST

5. THREE LAMP RAPID START BALLAST

6. FOUR LAMP RAPID START BALLAST

7. ONE LAMP INSTANT START BALLAST

8. TWO LAMP INSTANT START BALLAST

9. THREE LAMP INSTANT START BALLAST

10. FOUR LAMP INSTANT START BALLAST

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TYPICAL WIRING DIAGRAMS
For Osram/Sylvania Rapid Start Ballasts

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1. ONE LAMP RAPID START BALLAST

2. TWO LAMP RAPID START BALLAST

3. TWO LAMP RAPID START BALLAST

4. THREE LAMP RAPID START BALLAST

SELECT PROPER VOLTAGE LEAD. CAP UNUSED LEAD.
DO NOT MATE CONNECTOR UNTIL INSTALLATION IS COMPLETE AND AC POWER IS SUPPLIED.
TEST ACCESSORY LEADS-REFER TO INSTALLATION INSTRUCTIONS FOR PROPER POLARITY WIRING.