



**East Detroit Public Schools
Eastpointe, MI**

**ON-LINE PORTION OF THE:
PROJECT MANUAL – GENERAL
REQUIREMENTS**

**Revision:
October 12, 2009**

**Barton
Malow**
Design/Construction Services

TM
ARCHITECTURE

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PROJECT MANUAL
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**SECTION 01140
USE OF PREMISES**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 SUMMARY

- A. This Section describes the following requirements including:
1. Use of Premises and Deliveries
 2. Use of Existing Elevators
 3. Use of Existing Facilities
 4. Existing Entrances and Drives
 5. Protection of Underground Facilities
 6. No Interruption of Occupancy/Sequencing
 7. Material Storage

PART 2 - USE OF PREMISES

2.01 USE OF PREMISES AND DELIVERIES

- A. Contractor and its Subordinate Parties shall be subject to such rules and regulations for the conduct of the Work as the Owner or Barton Malow Company may establish. All employees shall be properly and completely clothed while working. Bare torsos, legs and feet will not be allowed. Possession or consumption of alcoholic beverages or drugs, or other noxious behavior on the site is strictly prohibited. Violators shall be promptly removed from the site.
- B. Before starting the Work, Contractor shall ascertain from Barton Malow Company what entrances, routes or roadways shall be used for access to the Work, and use only those designated for movement of personnel, materials and vehicles to and from the Project site. Close coordination will be required of Contractor with the Owner, Barton Malow Company, other contractors, the city and others having an interest in the Project to assure that Work on the site, access to and from the site and the general conduct of operations is maintained in a safe and efficient manner, and that disruption and inconvenience to existing streets and property is minimized. Contractor is responsible to review the site and be familiar with all existing conditions within and around the Owner's property including local conditions and requirements.
- C. Contractors shall maintain free access to all buildings and areas of the site for designated vehicles, service vehicles and firefighting equipment and at no time shall block off or close roadways or fire lanes without providing auxiliary roadways and means of entrance acceptable to the Owner. Fire hydrants must remain accessible at all times. Contractors shall give the Owner and the local fire department at least forty-eight (48) hours notice of any such changes of routes.
- D. There is on-site parking for Contractors and their Subordinate Parties' employees. Off-site parking for construction employees shall be arranged by the Contractor. Each Contractor is responsible for providing transportation to and from the site, if required. Any additional arrangement is the responsibility of Contractor. Contractor, Subordinate Parties and their personnel will be allowed to park in the Owner's parking area.
- E. Contractors and their Subordinate Parties will not be allowed to use any Owner tools or equipment during the course of the Project.

- F. Each Contractor shall confine its Work to normal working hours; 7:00 am to 3:30 p.m., Monday through Friday. Contractor may execute the Work during the entire twenty-four (24) hours of any day of the week with the approval of Barton Malow Company and the Owner, providing that they so conduct their operations as to not create a public nuisance or disturb the peace, and provided such operations are conducted so as to comply with all applicable laws, ordinances, and regulations. Compensation to Barton Malow Company for supervisory staff due to abnormal working hours will at the requesting Contractor's expense.
- G. Whenever Contractor intends to depart from normal work hours, it shall notify Barton Malow Company in writing at least forty-eight (48) hours in advance. Failure of Contractor to give such timely notice may result in Barton Malow Company directing the removal or uncovering of the Work performed during such abnormal hours and Contractor's expense. Special arrangements can be made for emergency work or shutdowns as may be required.
- H. Use of explosives are not permitted.
- I. Each Contractor on behalf of itself and its Subordinate Parties shall be responsible for all damage to the Project including the existing buildings and grounds arising or resulting from its operations under the Agreement. Repair or replacement of damaged items shall be to the satisfaction of the Owner and Barton Malow Company.
- J. Each Contractor shall at all times maintain a clean and safe passageway for the Owner's operations and personnel in existing areas and maintain clearances adjacent to and in connection with the Work performed.
- K. Each Contractor shall effectively confine dust, dirt and noise to the actual construction area and in compliance with all applicable laws, rules and regulations.
- L. All Contractors and their Subordinate Parties shall restrict all Work activities associated with an area undergoing renovation to within the boundaries indicated by the Contract Documents. Any means of access or egress from the stipulated boundaries shall be coordinated with Barton Malow Company and the Owner.
- M. Work shall, if required, be constructed in phases to accommodate the Owner's use of the premises during construction and to accommodate installation of equipment. Refer to Section 00230 Schedule and Phasing of the Project Manual.
- N. All Contractors shall limit their use of the premises for Work and for storage, to allow for:
- * Work by other contractors
 - * Owner occupancy
 - * Public use and safety
 - * Free use of corridors at all times
- O. The Owner and Barton Malow Company expect Contractors and their Subordinate Parties to exercise common sense and good judgment, and to conduct themselves in a manner which would be a credit to the Owner. Without limiting other applicable provisions of the Contract Documents, Contractor shall not engage in the following:
1. Conduct that interferes with Work or work of others.
 2. Conduct that interferes with, or is detrimental to good safety and well-being.
 3. Unauthorized use of confidential information.
 4. Discourtesy toward Owner's staff, visitors and the general public (including abusive, vulgar or other language).
 5. Soliciting.
 6. Disregard of safety, sanitation, or security laws, rules and regulations.
 7. Conduct detrimental to the Owner's operations and good reputation.
 8. Stealing.
 9. Gambling.

10. Possession and/or use of narcotics or intoxicants.
11. Threats or abuse of others.
12. Disorderly conduct or fighting.
13. Playing of loud music.
14. Falsification of information.
15. Unauthorized travel of Contractor's employees outside the designated project Work areas.
16. Discriminating Behavior.
17. Sexual or Ethnic harassment.

Willful disregard of the above will be grounds for requiring the offending person(s) to be removed from the Project, and may subject the Contractor to termination under the Agreement.

- P. Each Contractor on behalf of itself and its Subordinate Parties shall not load or permit any part of a structure to be loaded with a weight that will endanger its safety.
- Q. Where new temporary partitions are established and located by the designated contractor/Subcontractor, all existing mechanical, fire protection, plumbing and electrical devices used for life safety purposes shall be relocated by the Contractor installing or relocating same to the new temporary partitions so as to be usable and visible to Owner personnel and activities. Items such as, but not limited to, exit lights, fire protection systems, fire alarm systems, and similar items shall be relocated. In the event that a passageway is blocked or barricaded, visible rerouting directions for traffic flow shall be posted.
1. The Project is under the jurisdiction of the State of Michigan DLEG Department of labor and economic growth.
 2. Partition construction shall provide a fire-resistant classification approved by the state Fire Marshal. Openings in such partitions shall be protected by fire doors consistent with the rating of the partition.
- R. The Owner shall have the option to curtail or delay any activity that affects its operations. Should a Contractor be asked to stop its Work, the Contractor shall do so immediately and proceed with other activities with no additional cost to the Owner or Barton Malow Company. The Owner may occupy the premises during the entire period of construction for the conduct of its normal operations. All Contractors are to cooperate with the Owner and Barton Malow Company in all construction operations to minimize conflict, and to facilitate Owner usage.
- S. Contractors and their Subordinate Parties are prohibited from canvassing, soliciting, posting, or distributing literature or materials for any purpose while on the job site.
- T. Contractors and their Subordinate Parties shall be responsible for adhering to the smoking policies and regulations of the Owner and the Owner's facilities.
- U. The preservation of existing trees and other vegetation on the site to the maximum extent possible is extremely important. In many cases, trees in close proximity to the site work are to be preserved. Each Contractor must plan its Work and instruct its Subordinate Parties to conduct their operations to avoid damage to trees and vegetation (provide barriers as required). Indiscriminate driving about the site, disposing of waste, storage of materials upon or against trees or any other activity which is harmful to trees or vegetation that are to be preserved will not be tolerated. Parking areas, storage areas, and access to the buildings will be confined to areas designated and approved by Barton Malow Company. Any case of damage to any tree shall be reported to Barton Malow Company immediately so that professional repairs can be made. The cost of such required repairs or treatment shall be charged to the responsible Contractor. Willful disregard of the above will be grounds for requiring the offending person(s) to be removed from the Project, and may subject the Contractor to termination under the Agreement.

2.02 USE OF EXISTING ELEVATORS

- A. Each Contractor may, subject to the approval of Barton Malow Company and Owner, use the existing elevator(s) designated by the Owner within the contract boundaries for movement of personnel and materials to a construction area.
- B. In those cases where an elevator is to be shared with Owner services, the Owner's employees and services take priority over construction activities. Each Contractor is responsible for proper conduct of its Subordinate Parties with regard to the use of the elevator. Any damage to the elevator due to oversized load, excess weight or other conditions is the individual Contractor's responsibility.
- C. Use of the elevator(s) at times other than normal working hours shall be coordinated with Barton Malow Company and Owner.

2.03 USE OF EXISTING FACILITIES

- A. Contractors shall limit their and their Subordinate Parties' usage of the occupied areas of the facility to that which is absolutely necessary for the installation of their Work. Parts of the facility not in the construction area are "off limits" unless a specific work task is being performed as designated by Barton Malow Company.
- B. Contractors and their Subordinate Parties will not be allowed the use of the Owner's cafeteria, parking, telephones, toilet facilities, tools, equipment, or any other item or facility belonging to the Owner, unless specifically authorized by Owner and Barton Malow Company. Contractor's Subordinate Parties shall not use the Owner's facilities for personal use such as lunchrooms and similar areas for coffee breaks, clothing changes or similar uses. The Owner's complex shall be off-limits to all construction personnel without prior approval of Barton Malow Company and the Owner.

2.04 EXISTING ENTRANCES AND DRIVES

- A. Contractor and construction delivery access to the worksite shall be as designated by Barton Malow Company. Selected entrances to the Project site will remain open during normal working hours for the use of all Contractors. Contractor shall utilize specific entrances for material deliveries, equipment deliveries and worker access to the Project site as directed by Barton Malow Company.
- B. At no time are ANY vehicles to be parked, whether attended or not, in the Owner's entrances or drives. Any material delivery which will tie up the Owner's entrances or drives in excess of fifteen (15) minutes shall be pre-scheduled with the Owner through Barton Malow Company. In scheduling construction deliveries the Contractor agrees that the Owner's deliveries and operations will take precedence.

2.05 PROTECTION OF UNDERGROUND FACILITIES

- A. Each Contractor shall provide and maintain proper shoring and bracing for existing underground utilities, sewers, and building foundations, encountered during its Work, to protect the project, or any part thereof, and surrounding areas from collapse or movement, or any other type of damage until such time as they are to be removed, incorporated into the new Work or can be properly backfilled upon completion of new Work. All such disruptions of services shall be limited to a maximum of FOUR (4) hours. Prior to beginning any Work that may affect underground facilities, Contractor shall contact MISS DIG and utility companies for the location of all existing underground services and provide, if requested, documentation of such contact to Barton Malow Company. If necessary, Contractor shall pay for appropriate layout and locating of existing utilities.
- B. Utilities and/or other services which are shown, or not shown but encountered, shall be protected by the Contractor from any damage arising or resulting from Work, unless or until they are abandoned. If the utilities or services are damaged from Contractor's Work Contractor shall immediately repair any damage and restore the utilities and services to an equal or better condition than that which existed prior to the damage. Contractor will be responsible for all liabilities, expenses, lawsuits or claims arising or resulting

from such damage and will defend, hold harmless and indemnify Owner and Barton Malow Company from any claims or law suits or other expenses.

- C. Each Contractor on behalf of itself and its Subordinate Parties shall be responsible for all damage to the Project and surrounding areas including the existing building and grounds arising out of or resulting from their performance of the Work. Repair or replacement of damaged items shall be to the satisfaction of the Owner and Barton Malow Company.

2.06 NO INTERRUPTION OF OCCUPANCY/SEQUENCING

- A. Each Contractor is responsible to plan, coordinate and execute its Work in such a manner that there will be no disruption of the Owner's operations. If an interruption of operations is unavoidable, then this Work will be scheduled with the Owner through Barton Malow Company prior to beginning such Work.
- B. Due to the nature of the Owner's existing areas, the sequence of Work must be scheduled and coordinated with the Owner's ongoing operations to minimize disruptions and/or disturbances to the Owner's Work and at all times remain as secondary to the Owner's operations. Each segment of the Work shall be coordinated with Barton Malow Company and the Owner prior to proceeding.
- C. Work that interrupts the Owner's services will be accomplished during the time periods when it is least inconvenient to the Owner and completed in the shortest possible time frame. Contractors may be requested to work split shifts, weekends, off peak Owner loading periods, etc., to accommodate Owner's utility and service requirements, such as, but not limited to, medical gas systems, electrical power, HVAC systems, storm and sanitary lines.
- D. Contractors are responsible to provide any temporary alternate supply and/or return conditions to maintain services to the facility while Work is being performed for each Bid Category. Place safety stages or markers to indicate location of disconnected services.
- E. No interruptions to Owner's power, lighting, signal, or alarm circuits will be permitted without the express written permission of the Owner. Arrangements for interruptions shall be made with the Owner at least forty-eight (48) hours prior to the interruption and shall be made at such time and duration as authorized by them. Temporary feeders, transformer jumpers, connections, circuits, etc., shall be used as required to accomplish the above at no additional cost to the Owner and Barton Malow Company.
- F. Contractors shall construct the Work in stages to provide for public convenience. Contractors shall not close off public use of facilities until completion of one stage of construction will provide alternative usage, or until other means have been provided.
- G. These provisions shall apply to all Contractors and are applicable whether a Contractor is either directly or indirectly affected.

2.07 MATERIAL STORAGE

- A. Each Contractor shall provide suitable storage trailers on site as required. These are to be relocated and removed when directed by Barton Malow Company.
- B. Contractors shall stock the job with sufficient materials to maintain progress and schedule and without interfering with the Work or storage of others. Each Contractor assumes full responsibility for the protection and safekeeping of products under its control which are stored on the site. Contractors must move any stored products, under their control, which interfere with operations of the Owner or separate contractors as directed by Barton Malow Company. All Contractors are to cooperate with Barton Malow Company and other contractors in this regard.
- C. Each Contractor shall provide sufficient protection for its materials and equipment from damages by weather or construction work or other hazards.

- D. During progress of Work and upon completion of the Work, Contractors shall remove all debris and leave the area in a clean and orderly condition.
- E. Each Contractor shall submit a receipt of shipment for all equipment stored on site or off-site to Barton Malow Company. No materials or equipment shall be removed from the site without the permission of Barton Malow Company.
- F. Storage of combustible materials within or adjacent to the building is prohibited.

END OF SECTION 01140

SECTION 01250 CHANGES IN THE WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.
- B. Various forms of field communications will be used to document communication between the Contractor and Barton Malow Company as described in Section 01320 Communications. Field Communications are interpreted to be within the scope of the Agreement and as such are not authorizations for Work beyond the scope of the Agreement.

1.02 SUMMARY

- A. This section identifies an effective method of identification of changed work and provides an efficient method of modification of Contract Documents.
- B. This section describes the following requirements including:
 - 1. Types of Change Documentation
 - 2. Compensation of Overhead and Profit for Changes in the Work
 - 3. Itemization of Cost of Changed Work

PART 2 - TYPES OF CHANGE DOCUMENTATION

2.01 ARCHITECT INSTRUCTIONS

- A. There are two forms of Architect Instructions used on the Project, namely the Architect's Supplemental Instruction ("ASI"), AIA Document G710, and the Proposal Request ("PR"), AIA Document G709. These documents will be issued by the Architect and distributed by the Barton Malow Company to affected Contractors.
 - 1. ASI's are used by the Architect to issue supplemental instructions or interpretations involving minor changes in the Work that will not affect the contract price or schedule.
 - 2. PRs, often termed "Bulletins" are used by the Architect to identify changes in the Contract Documents which may affect the Contractor's contract price or schedule. An itemized write-up narrative and corresponding "bubbled" change on the drawings or specifications usually accompanies this document.
- B. PRs or "Bulletins" sent to Contractors which may involve a change in the contract price or schedule will be accompanied by –the Barton Malow form entitled "PCO- Quotation Only". In the event that the timing does not allow the For Quote Only process, then Barton Malow Company will issue its form entitled "PCO–Notice to Proceed" to the Contractor.

2.02 PCO- NOTICE TO PROCEED AND FOR PCO- QUOTATION ONLY FORMS

- A. A PCO- Notice to Proceed is used when Work must be performed with swiftness and authorization to proceed by Change Order is inappropriate due to time restrictions. A PCO- Notice to Proceed may be issued for changes in schedule or contract price. In order for a PCO- Notice to Proceed to be valid, it must be signed by Barton Malow Company and Owner. The terms for establishing the additional cost and processing of the PCO- Notice to Proceed into a Change Order shall be identified prior to its release by Barton Malow Company.

- B. If a change issued by the Architect, through Barton Malow Company, may result in an additional cost to the Contractor, Barton Malow Company will issue a PCO- Quotation Only with the Architect's documents. The PCO- Quotation Only will describe the change or reference the appropriate documents and will have attached the detailed descriptions, sketches and plans required for the Contractor to quote the change.
- C. Barton Malow Company will send the PCO- Quotation Only to all potentially affected Contractor.
- D. Once the Contractor receives the PCO- Quotation Only or the PCO- Notice to Proceed, it shall prepare a detailed cost estimate for the change. This estimate shall include an itemized takeoff of labor, equipment and material with a unit cost for each item. Under no circumstances will a PCO- Quotation Only or a PCO- Notice to Proceed be processed unless accompanied by a complete cost breakdown. The PCO- Quotation Only must be returned no later than the date indicated on the PCO- Quotation Only or at the direction of Barton Malow Company.
- E. Once completed, the Contractor shall sign and date the PCO- Quotation Only and submit it with proper backup to Barton Malow Company. Barton Malow Company will then review, evaluate, possibly negotiate and then when acceptable, process the PCO- Quotation Only through the Owner's Representative and Architect's Representative. Once the quote for the work under the PCO- Notice to Proceed is submitted to Barton Malow Company, it will review, evaluate, possibly negotiate, and then, when acceptable, process the resulting Change Order through Owner's Representative and Architect's Representative.
- F. The PCO- Quotation Only is a document used for processing Contractor's quotations and is **not** a Change Order. Therefore, completion of the PCO- Quotation Only does **not** release the Work to begin.
- G. PCO- Quotation Only and the PCO- Notice to Proceed will precede a Change Order. Contractors shall receive an approved PCO- Notice to Proceed or an executed Change Order before starting Work. Any changed Work performed by Contractor without a properly executed PCO- Notice to Proceed or a properly executed Change Order is at Contractor's sole risk and expense. BILLINGS AGAINST CHANGES WILL NOT BE ACCEPTED AFTER A PCO- NOTICE TO PROCEED OR FOR QUOTE ONLY IS ISSUED, BUT ONLY AFTER A CHANGE ORDER HAS BEEN PROCESSED AND SIGNED BY ALL PARTIES.

2.03 CHANGE ORDER

- A. Change Orders will be written and issued by Barton Malow Company. Barton Malow Company will first issue the Change Order to the Contractor for signature. The Change Order will then be returned to Barton Malow Company. Once all appropriate signatures are secured, an executed copy will be sent to the Contractor. All change orders must be signed off by the owner and architect.
- B. Once the Change Order has been processed and signed by all parties, the Contractor. may invoice for payment on the completed portion of Work.
- C. Agreement on any Change Order, shall constitute a final settlement of all matters relating to the changed Work that is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change, any impact such change may have on the unchanged Work, including but not limited to claims for acceleration, stacking, inefficiency, ripple effect, disruption, compression, interference, delay and cumulative impact, and any and all adjustments to the contract price and the schedule.

PART 3 - COMPENSATION OF OVERHEAD AND PROFIT FOR CHANGES IN THE WORK

1.01 CONTRACTOR'S OVERHEAD AND PROFIT

- A. When changed Work is performed by a Contractor itself and not by its Subordinate Party, the Contractor’s charge for overhead and profit shall in no event exceed fifteen percent (15%) of the approved cost of the changed Work. When changed Work is performed by a Contractor’s Subordinate Party, the Contractor’s charge for overhead and profit shall in no event exceed five percent (5%) of the approved cost of the changed Work.
- B. When changed Work is performed by the Contractor’s Subordinate Party, the Subordinate Party’s charge for overhead and profit shall in no event exceed fifteen percent (15%) of the approved cost of the changed Work when such Work does not involve the Subordinate Party’s subcontractors; or five percent (5%) of the approved cost of the changed Work when such changed Work is performed by the Subordinate Party’s subcontractors.
- C. Contractor and Subordinate Party overhead and profit shall include cost (at the Project Site, home office and otherwise) of supervision, telephone, travel, copying, administrative services, office, power, light, tools, jobsite vehicles, and all other general expenses, including bond premiums. In no event shall these be charged as cost of the Changed Work.

PART 4 - ITEMIZATION OF COST OF CHANGED WORK

4.01 CORRELATION WITH CONTRACTOR'S SUBMITTALS

- A. Contractors shall revise the Schedule of Values and Request for Payment forms to record each Change Order as a separate item of Work, and to record the adjusted contract price.
- B. Contractors shall revise the Construction Schedule to reflect each change in Contract Time approved by a Change Order.
 - 1. Contractors shall revise sub-schedules to show changes for other items of Work affected by the changes.
- C. Upon completion of Work under a Change Order, enter pertinent changes in Record Documents (Refer to Section 01720 – Project Record Documents).

4.02 COST OF THE CHANGED WORK

- A. The "Cost of the Changed Work" shall be approved by Barton Malow Company and shall mean the costs necessarily incurred by the Contractor in the proper performance of the Changed Work. Such rates shall not be higher than those customarily paid at the place of the Project. The Cost of the Changed Work shall only include those items set forth below,

<u>WAGES OF LABOR</u>	Wages of construction workers directly employed by Contractor to perform the construction of the changed Work at the site
PAYROLL MARKUP	The amount approved by Barton Malow Company and Owner which covers the costs paid by the Contractor for taxes, insurance, contributions, assessments, and benefits required by law or collective bargaining agreements and for personnel not covered by such agreements, customary benefits such as sick leave, medical and health benefits, holidays vacations and pensions, provided that such costs are based on the wages and salaries of labor performing the changed Work.
COST OF EQUIPMENT, MATERIALS, AND SUPPLIES	Costs of materials, equipment and supplies to be incorporated into the changed Work less all savings, discounts, rebates and credits accruing to the Contractor.

<p>RENTAL CHARGES FOR EQUIPMENT NOT OWNED BY CONTRACTOR</p>	<p>Rental charges for equipment not owned by Contractor that is necessary for completion of the Changed Work. Rates and quantities rented must be approved in advance by Barton Malow Company.</p>
<p>TAXES</p>	<p>Sales or use taxes imposed by a governmental authority which are directly attributed to the changed Work and for which the Contractor is liable.</p>
<p>SUBCONTRACTOR COSTS</p>	<p>Payments made to the Subcontractors for proper execution of Changed Work, subject to the limits set forth in Subparagraph 3.01 B. above for overhead and profit.</p>

B. In no event shall the Cost of Changed Work include:

1. Salaries or wages of persons other than those directly performing the changed Work, including Contractor’s personnel stationed at the principal office;
2. Expenses of the Contractor’s principal office and offices other than the site office, except as provided in section 3.01 A. above;
3. Overhead and general expenses of any nature, except as set forth in sections 3.01 A and 3.01 B.;
4. Capital expenses of Contractor, including interest on the Contractor’s capital employed for the Changed Work;
5. Rental costs for machinery or equipment, except as allowed under section 4.02 A above, or tools of any kind, unless specifically identified and approved in advance in writing by Barton Malow Company;
6. Costs due to the negligence or failure to perform of the Contractor or its Subordinate Parties;
7. Costs designated in section 3.01 C as being included in Overhead and Profit
8. Any cost not specifically described under section 4.02 A above, or otherwise approved in advance and in writing by Barton Malow Company and Owner.
9. Any bond premiums of portion of increased bond costs directly attributable to the changed Work.

4.03 QUOTATION FORMAT

Based on the above, the following formula will be utilized by all of the Contractors.

Number of PCO- Quotation Only, F.O _____
 Date of PCO- Quotation Only, F. O. _____
 Description of Change _____

Cost of Changed Work

Labor:

Carpenter	(No. of Hrs. x Rate)	xxx.xx	
Labor	(No. of Hrs. x Rate)	xxx.xx	
Ironworker	(No. of Hrs. x Rate)	<u>xxx.xx</u>	
		xxx.xx	xxx.xx
Mark-up on labor @	_____ %	xxx.xx	

Equipment, Materials, Supplies:

Ace Hardware	xxx.xx	
Acme Products	xxx.xx	
Concrete Supplier	<u>xxx.xx</u>	
	xxx.xx	

Subtotal	xxx.xx	
OH&P @ [15] %	<u>xxx.xx</u>	
Subtotal (1)		xxx.xx

TOTAL QUOTATION AMOUNT

Work by Own Forces	xxx.xx (1)
Work by Subcontractors	<u>xxx.xx</u> (2)
Total Quotation	<u>xxx.xx</u>

Contractors are to provide backup and breakdown documentation of all work items and costs to the satisfaction of Barton Malow Company so that it may accurately approve and recommend payment of same to Owner.

END OF SECTION 01250

**SECTION 01290
PAYMENT PROCEDURES**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 SUMMARY

- A. This Section describes the following requirements including:
1. Schedule of Values
 2. Application for Payment Process
 3. Reduction of Retention
 4. Payment for Materials Stored Off-site
 5. Waivers of Lien and Sworn Statements

PART 2 - PAYMENT PROCEDURES

1.01 SCHEDULE OF VALUES

- A. Once the Agreement is awarded, each Contractor must submit a Schedule of Values for its entire Work to Barton Malow Company for approval. This Schedule of Values must be submitted either within fifteen (15) days of award or fifteen (15) days prior to the first payment application deadline (per the Application for Payment Schedule), whichever comes first. The Schedule of Values must include labor and material line items for each portion of the Work (larger portions of Work such as concrete, curtain wall, drywall, mechanical, and electrical shall be broken down by elevation, floor, and areas appropriate), the Contractor shall separate bond costs, and general conditions line items as appropriate.
- B. The Schedule of Values will be submitted in a format as prescribed by, and to the level of detail specified by, Barton Malow Company.
1. The sum of the parts of the Schedule of Values shall equal the contract price.
 2. The minimum level of breakdown and order on the application for payment will be:
 - a. Bond costs, if applicable
 - b. General conditions line item(s)
 - c. Division 1 cost breakdown as required
 - d. Costs associated with preparation of closeout paperwork and documentation
 - e. Major portions of the Work shall be broken down into labor and material line items for specific areas of the facility
 - f. A listing of approved and executed Change Orders to the Contract, if any, in sequential order.
 3. Schedule of Values items shall have a direct and understandable relation to the Project master construction schedule.
 4. Overhead and profit, mobilization, startup documents, submittals, closeout documents, bonds, labor and materials (by each area/location) shall be listed as a separate line item on the schedule of values.
- C. The Schedule of Values, unless objected to by Barton Malow Company, Owner or Architect, shall be the basis for the Contractor's application for payments.

- D. Barton Malow Company shall have the right to require the Contractor to alter the value or add/delete categories listed on the Schedule of Values at any time for the following reasons:
1. The Schedule of Values appears to be incorrect or unbalanced.
 2. A revision of the Schedule of Values is required due to the Contractor revising the sequence of construction or assembly of building components that in turn invalidates the Schedule of Values.
 3. Change Orders are issued to the Contractor and shall be incorporated into the Schedule of Values as a separate line item at the bottom of the Schedule of Values.
- E. The Contractor is required to correlate the documentation for payment of stored materials requested in the application for payment against the agreed upon breakdown of the Schedule of Values as described in Part 3 Payment for Stored Materials. Barton Malow Company reserves the right to not process the application for payment if this correlation has not been submitted in conjunction with the application.

2.02 APPLICATION FOR PAYMENT PROCESS

A. Step 1 JOB-SITE INSPECTION - DRAFT PAYMENT REQUEST

On or before the tenth (10th) of the month, according to Barton Malow Company's Application for Payment Schedule, the Contractor shall have a representative visit the Project site. The Contractor's representative will walk the Project site with Barton Malow Company's representative. The Contractor is to invoice for Work from the tenth (10th) of last month to the tenth (10th) of the present month. The Contractor shall submit during the review, the itemized rough draft of the Application and Certificate for Payment (AIA Documents G702 and G703 Continuation Sheet) identifying the Work completed, if any, during the current calendar month; shall review same with Barton Malow Company and obtain a preliminary approved copy of the draft for official submission (See Step 2). Contractor's pay application shall only reflect Work completed through the date of submission. In no event will payments be authorized for forecasted Work.

NOTE: No payment shall be issued to a Contractor for materials stored off-site unless supported by proper documentation as required by Barton Malow Company (upon advance notification of such requests only) as described in Part 3 Payment for Stored Materials.

Step 2 PAYMENT REQUEST PREPARATION/SUBMISSION

With the information agreed upon in Step 1, the Contractor will prepare a formal application for payment request. Four (4) originals of the request and Four (4) originals of the sworn statements (see Part 4) must be submitted to Barton Malow Company's Site office on or before the twenty-fifth (25th) of the month, or as scheduled (see Section 01600 Application for Payment Schedule). **Late or incomplete application packets will not be accepted.** The payment request will be made on an Application and Certificate For Payment form (AIA documents G702 and G703). Copies of these forms are included in Section 01600 Forms. Before submitting these documents to Barton Malow Company, each request for payment must be signed by a duly authorized agent of the Contractor and notarized. The Contractor must include with each request for progress payment a waiver of lien for all previous payments, Contractor's sworn statement and any necessary backup data as described in Part 4, Waivers of Lien and Sworn Statements. In addition, at submission of the final pay application Contractor shall provide unconditional final waivers of lien for all Subordinate Parties, as well as all documentation required under Section 01700 of the Project Manual – Contract Closeout and all additional back up data described in Part 4, Waivers of Lien and Sworn Statements. In requests for payment which follow the execution of a Change Order in excess of twenty-five percent (25%) of the Agreement price, Contractor must present a bond rider evidencing that the penal

sum of any required payment and performance bonds have been increased to one hundred percent (100%) of the adjusted Agreement price, or such other percentage as set forth in Section 00200 of the Project Manual, Instructions to Bidders. Submission of the required back-up data is a condition precedent to payment.

Step 3 CHECK DISTRIBUTION

- A. The Owner through Barton Malow Company will issue individual checks to each Contractor. The Contractor will receive the waiver of lien with the check and will be required to sign three (3) originals of the waiver upon receipt of the check each month (see Part 4).
- B. The Contractor shall provide all supporting documentation substantiating the Contractor's right to payment as the Owner, Barton Malow Company and the Architect may require.

2.03 REDUCTION OF RETENTION

- A. The Owner through Barton Malow shall be entitled to withhold ten (10%) percent of each payment due to a Contractor until Substantial Completion of the Contractor's Work. There will be no reduction in retainage until the completion of the punch list. (After the completion of the punch list, a reduction may be requested). No final reduction will be allowed until close out.
- B. The Contractor, when requesting a reduction of retention, shall submit to Barton Malow Company, an AIA G707, Consent of Surety to Reduction In or Partial Release of Retention form in Section 01600 Forms.
- C. Within thirty (30) days after Certificate of Substantial Completion has been issued for all portions of its Work, the Contractor's retention may be reduced to a sum as Barton Malow Company and the Architect may determine is suitable to protect Barton Malow Company and the Owner for all incomplete Work and any unsettled claims.
- D. Notwithstanding the foregoing, payment of retention shall be subject to all other conditions precedent that apply to payment as set forth in the Contract Documents.

PART 3 - PAYMENT FOR MATERIALS STORED OFF-SITE

3.01 PAYMENT FOR MATERIALS STORED OFF-SITE

- A. The Contractor, if intending to use an off-site storage area or facility for stored materials, shall submit a written request to the Barton Malow Company and obtain approval prior to submitting the first application for payment as described in Part 2 Applications for Payment.
- B. Payments will be made for materials properly stored off site. Properly stored shall mean in an insured warehouse with the Owner and Barton Malow Company being named as insureds, and all material identified as property of the Owner. The Contractor is responsible for all associated off site storage costs, transportation, insurance, including insurance coverage for stored material, while in transit, unless Contractor obtains written documentation that the material is covered during transit under a Builder's Risk Policy applicable to the Project. Contractor shall provide Barton Malow Company and the Owner verification in writing for all material so stored. Such materials shall be protected from diversion, destruction, theft, and damage to the satisfaction of Barton Malow Company, Owner and the Lender (if any), specifically marked for use on the Project, and segregated from other materials at the storage facility. The Contractor bears all risk of loss to materials and equipment stored off site.
- C. Contractors are to provide supporting documentation in the form of invoices, insurance policies, and any other pertinent documentation as requested by Barton Malow Company or Owner for items the items stored off-site. Documentation shall include the following:

1. Detailed description of the material including quantities that will serve as a material description for the billing and as information to file a claim with an insurance company.
 - a. Stored Materials - Each item must be identified as to manufacturer, model number, and serial number, if applicable, or other identifiers should be listed for each item. Each listing must be accompanied by invoices, shipping tickets, consent of surety, and any other applicable supporting documentation.
 - b. Stored Manufactured Building Materials - Each item must be identified as to type, manufacturer's number or designation, and should also list the number of cartons and the contents therein storage. Each listing must also be accompanied by supporting documents including all invoices, shipping tickets and consent of surety.
 - c. Stored Fabricated Materials - A listing specifying the number of pieces, items, and marks as may be applicable to the particular type of items. Photographs should accompany the request.
 2. Individual itemized costs of materials and the total cost value, which shall not exceed the Contractor's subcontractor or material supplier cost. The total cost value shall be supported by the Contractor's subcontractor or material supplier invoices for the stored material.
 3. Estimated cost value for those materials that are fabricated by the Contractor's subcontractor or material supplier.
 4. The location where the material is physically stored, including the warehouse address and storage location within the warehouse, such as bin number, aisle number or other designation. All material shall be segregated and marked.
 5. Copies of the insurance policies that cover the stored materials and that names Barton Malow Company and the Owner as insureds. The limit of the insurance policy shall be equal to or greater than the replacement value of the stored materials.
- D. When Applications for Payment include products stored off the Project Site or stored on the Project Site but not incorporated in the Project, for which no previous payment has been requested, a complete description of such product shall be attached to the application.
- E. Contractor shall submit a certificate of title listing the Owner's ownership in the off-site stored materials equal to the amount paid effective at the time funds are delivered.
- F. If the size, quantity, and/or type of material or product is such that a bonded warehouse is deemed unsuitable, then, with Barton Malow Company's approval, the Contractor may elect to prepay its subcontractor or supplier for certain material and products which are to remain on and be stored on that subcontractor/supplier's premises until needed by the Project. In such event, the Contractor shall enter into a security agreement with the subcontractor/supplier under which the Contractor shall be granted a security interest in and to all such material and products fabricated and/or to be supplied by the subcontractor/supplier for this Project and stored on the subcontractor/supplier's premises. This Security Agreement shall be a part of the financing statement, which shall be presented to a filing officer for filing pursuant to the Uniform Commercial Code. All expenses incurred in obtaining this security agreement shall be at Contractor's sole cost and expenses, and shall not accrue to the Owner, Barton Malow Company, Architect, nor the Project. A copy of each and every security agreement shall be filed with Barton Malow Company with the first Application for Payment which requests payment for such material or products.
- G. All payment requests for off-site stored materials must be accompanied using the "Payment Request for Stored Materials" and a "Subcontractor Affidavit for Stored Materials" form in Section 01600 Forms.

Payment requests for stored materials not complying with the foregoing requirements will not be approved. Contractors are to notify the Barton Malow Company in ample time to conduct verification procedures.

- H. Contractors may not apply the cost of materials stored off-site towards a reduction in the retention amount.
- I. Representatives of Barton Malow Company, Owner and the Lender (if applicable) shall have the right to make inspections of the storage areas at any time.

PART 4 - WAIVERS OF LIEN AND SWORN STATEMENTS

4.01 WAIVERS OF LIEN

- A. The Contractor's first Application for Payment (see Part 2 Applications for Payment) will be based upon 100 percent of the value of Work installed. The first payment, amounting up to 90 percent of application, will be made to the Contractor without supporting documentation. Subsequent Applications for Payment must be accompanied by lien waivers from the Contractor, its Subordinate Parties or receipted invoices covering payment to the Contractor for previous calendar month period. Lien waivers must be unconditional and must show the amount paid.
- B. An "Acknowledgment of Payment and Partial Unconditional Release" (see Section 01600 Forms) will be printed and distributed with the check to each Contractor by Barton Malow Company for payment of the previous month's application. The Waiver of Lien is to be signed by an authorized representative of the Contractor. Under no circumstances will payment be released until the completed "Acknowledgment of Payment and Partial Unconditional Release" has been submitted and signed by the Contractor from the previous month.
- C. Final payment will not be made until a "Final Release Subcontractor/Material-man" (see Section 01600 Forms) has been submitted. This will also be distributed by the Barton Malow Company for Contractor signature and must be returned by the Contractor. The Final Release must be signed by an authorized representative of the Contractor and must be notarized.
- D. Final unconditional waivers will be required for all of Contractor's Subordinate Parties listed on Contractor's sworn statement. These final waivers must be submitted along with the final release, before payment can be made.

4.02 SWORN STATEMENTS

- A. The appropriate number of original "Sworn Statements" (see Section 01600 Forms) must be completed to the satisfaction of Barton Malow Company, signed and notarized by an authorized representative of the Contractor and submitted with the Contractor's Application for Payment (see Part 2) monthly to the Barton Malow Company.
- B. The Contractor's Subcontractor's sworn statements, waivers and other supporting documentation will be required with each pay application.

END OF SECTION 01290

SECTION 01310 MEETINGS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 DESCRIPTION OF REQUIREMENTS

- A. The Barton Malow Company shall schedule, chair, and administer all periodic meetings throughout the progress of the work for the purpose of coordinating and expediting the Work. Such meetings shall be held at the job site bringing together responsible representatives of active Contractors for the purpose of planning, assessing progress and discussing problems of mutual concern. Each Contractor, and its Subordinate Parties' representative attending the meetings shall be authorized to act on behalf of and make decisions/commitments for the entity each represents, the decisions made at the meetings and each Contractor who should be in attendance will be held responsible for information and directions given at the meeting.
- B. The Barton Malow Company will prepare and distribute the minutes of all meetings, if Barton Malow Company determines minutes are required. If the attendees do not object in writing to any part of the meetings within ten (10) days of distribution of the minutes, the minutes shall be accepted as written.
- C. The scope of meetings include, but are not limited to:
1. Preconstruction Meeting
 2. Job Progress/Coordination Meetings
 3. Other Meetings

PART 2 - TYPES OF MEETINGS

2.01 PRECONSTRUCTION MEETING (KICK-OFF)

- A. A Preconstruction (kick-off) meeting will be conducted with representatives of all the Contractors within fifteen (15) days after the Agreement is awarded at the jobsite or as designated by the Barton Malow Company. The agenda may include:
- a. Discussion on major subcontracts and suppliers
 - b. Major and/or critical work sequencing regarding the project schedule
 - c. Project coordination and designation of responsible personnel
 - d. Procedures and processing of field instructions, requests for proposal, submittals, change orders, applications for payment, etc.
 - e. Quality assurance/control issues
 - f. Adequacy of distribution of contract documents
 - g. Procedures for maintaining record documents
 - h. Use of premises, office, work and storage areas and other Barton Malow Company requirements
 - i. Construction facilities/temporary utilities
 - j. Safety and security procedures
 - k. Other administrative procedures
 - l. Review of Owner expectations

2.02 JOB PROGRESS/COORDINATION MEETINGS

- A. On-site project coordination/progress meetings will be held on a bi-weekly basis or as appropriate throughout the life of the Project. The Barton Malow Company will set the agenda for the Project progress meeting. At a minimum, each Contractor shall be prepared to discuss the following:
- a. Actual vs. scheduled progress for the prior two-week period
 - b. Planned construction activities for the next four weeks
 - c. Problems with, revisions to and corrective measures and procedures to regain the construction schedule, if required
 - d. Review of off-site fabrication, delivery schedules
 - e. Document clarification requests
 - f. Coordination items with other Contractors
 - g. Changes in the work affecting cost and/or time
 - h. Submittals and shop drawings
 - i. Field observations, problems, conflicts
 - j. Quality control issues and non-conformance resolutions
 - k. Safety issues

2.03 OTHER MEETINGS

- A. **QUALITY ASSURANCE MEETINGS** - Barton Malow Company may conduct quality assurance/quality control meetings as necessary during the progress of the Work. Barton Malow Company will set the agenda for the quality meeting. At a minimum, the Contractor shall be prepared to discuss the following:
- a. Testing and inspection procedures
 - b. Tolerance requirements
 - c. Quality samples
 - d. Reporting of non-conformance items
 - e. Corrective actions assigned
 - f. Disposal of non-conforming items
 - g. Job procedures
- B. **SAFETY MEETINGS** - Refer to Section 00810 Safety and Loss Control Program for more information.
- C. **INSPECTIONS TOURS** - Formal inspections/tours may be made of the Project progress by the Owner, Architect, local, state or federal officials, insurance representatives, or others as the occasion warrants and as scheduled by Barton Malow Company. If requested by Barton Malow Company, each Contractor shall be prepared to show and explain Work throughout the building to the inspecting parties, in addition to providing Work in compliance with these inspections.
- D. **CHANGE REQUEST MEETINGS** - Upon issuance of a major Proposal Request (a.k.a. bulletin), Barton Malow Company may conduct a meeting as necessary with all significant Contractors to review its contents and determine cost, delivery and schedule impacts. At a minimum, the Contractor shall be prepared to discuss the following:
- a. Impact of out-of-sequence work
 - b. Identification of pertinent long-lead material and system impact
 - c. Alternative recommendations
 - d. Evaluation of approximate cost magnitude
 - e. Evaluation of impact on completion
 - f. Alternate sequencing
 - g. Due date for Contractor pricing and scheduling impact

E. PREINSTALLATION MEETING - Construction Manager will Coordinate a preinstallation conferences at Project site. (as required)

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related Change Orders.
 - d. Purchases.
 - e. Deliveries.
 - f. Submittals.
 - g. Review of mockups.
 - h. Possible conflicts.
 - i. Compatibility problems.
 - j. Time schedules.
 - k. Weather limitations.
 - l. Manufacturer's written recommendations.
 - m. Warranty requirements.
 - n. Compatibility of materials.
 - o. Acceptability of substrates.
 - p. Temporary facilities and controls.
 - q. Space and access limitations.
 - r. Regulations of authorities having jurisdiction.
 - s. Testing and inspecting requirements.
 - t. Required performance results.
 - u. Protection of construction and personnel.
3. Record significant conference discussions, agreements, and disagreements.
4. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

END OF SECTION 01310

SECTION 01320 COMMUNICATIONS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 SUMMARY

- A. This Section describes the following requirements including:
1. Contractor Correspondence
 2. Contractor's Daily Report
 3. Request for Information (RFI)

PART 2 - METHODS OF COMMUNICATION

2.01 CONTRACTOR CORRESPONDENCE

- A. All field and/or construction correspondence and/or communications must be directed through Barton Malow Company, Barton Malow Company, TBD, Steven L. Rewers, Senior Project Manager, Phone: TBD, Fax: TBD, Email: steven.rewers@bartonmalow.com and should list the following as appropriate:

Project : **BP #2**

Additional Project Designations required on some forms:

Barton Malow Company Project Number: _____

Architect's Project Number: 09082

Bid Package Number(s) and Category Number(s)

Subject: Clearly indicate subject matter of correspondence

2.02 CONTRACTOR'S DAILY REPORT

- A. Each Contractor will prepare and distribute daily to Barton Malow Company a comprehensive daily report and maintain it during the entire project period. The daily report shall be submitted to Barton Malow Company's superintendent by the end of the day for that day's Work. Each Contractor is responsible for specifically alerting Barton Malow Company to items which could result in claims or delays. The daily report shall include the following as a minimum:

- * Manpower by trade
- * Weather
- * List of visitors
- * Detailed description of work being performed with specific location, floor, and all other pertinent information
- * Job Hazard Analysis/Pre-Task Planning
- * Situations or circumstances which could delay work or give causes for delays or claims for extension or added costs
- * Instruction of information requested
- * Accidents, injuries, and incidents
- * Materials received with attached material receipts
- * Major equipment arrivals/departures

- B. Each Contractor may provide its own daily report if it covers the same issues as addressed in Barton Malow Company's Contractor Daily Report form. The suggested Contractor Daily Report form will be provided to the Contractor and is in Section 01600 - Forms.

2.03 REQUEST FOR INFORMATION (RFI)

- A. The Request for Information (RFI) is in Section 01600 Forms.
- B. In the event that a clarification is required due to a question raised by the Contractor pertaining to the Contract Documents, the Contractor shall submit a Request for Information (RFI) to the Barton Malow Company, which will be forwarded to the Architect.
- C. The Architect will return the RFI to Barton Malow Company as expeditiously as possible with its reply. In some instances, the Architect may issue its reply to the RFI on other documents, in which case, the RFI will simply reference these documents.
- D. The RFI will be returned to the Contractor by Barton Malow Company. The Contractor is responsible to give proper notice as set forth in the Contract Documents if a response will cause the Contractor to incur additional expense or expend additional time which could impact the schedule. If extra work or an additional cost may exist due to the clarification, Barton Malow Company may issue a PCO- Quotation Only or PCO-Notice to Proceed to the Contractor as described in Section 01250 Changes in the Work of the Project Manual.

END OF SECTION 01320

SECTION 01330 SUBMITTALS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Specific attention is directed to all Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section and relate to various submittals required to be submitted to Barton Malow Company for the Project.
- B. Submit to Barton Malow Company: Shop Drawings, Certifications, Product Data, Samples, Tests, and all other submissions required by the Architect's technical specifications. Refer to each specification section for specific submittal requirements.

1.02 SUMMARY

- A. This Section describes the following requirements including:
 - 1. Scope
 - 2. Submittal Register
 - 3. Submittal Requirements
 - 4. Submittal Process and Responsibilities
 - 5. Re-submission Requirements

1.03 SCOPE

- A. Where requirements of this Section vary from the requirements of the General Conditions, this Section's requirements shall take precedence.
- B. Barton Malow Company will prepare and submit a submittal register/schedule for Contractor's use in preparing submittals required for the Project. Contractors shall complete the submittal schedule/register showing the dates for submission, lead times required and their expected delivery dates. Submittals received on the date scheduled will be processed as specified. Contractor is responsible to provide all submittals required under the Contract Documents, whether or not listed in the submittal register. Barton Malow Company/Owner/Architect will not be held responsible for delays due to receiving submittals after the date indicated in the Contractor's submittal schedule.
- C. Submittals shall be submitted based on each technical specification section. Submittals containing information about more than one specification section will be returned for re-submittal. When the specifications call out specific materials, products, etc. with model numbers, etc. which the Contractor intends to use for the Work, the Contractor may submit a letter on Contractor's letterhead and notarized, within fifteen (15) days of award of the Agreement, listing all specified materials, products, etc. (with specific model numbers, series, type, etc. certifying that the Contractor commits to using these products or materials as specified for its scope of Work. This certification letter, when approved by the Architect, will negate the need to provide individual submittals for these materials, products, etc., Contractor will provide information to allow proper coordination including electrical, mechanical connections and size, weight data.
- D. No shop drawings, product data, or samples will be accepted by Barton Malow Company until Subordinate Parties have been approved.
- E. Coordination: Each Contractor shall coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. The Contractor, by providing the submittal assures the Owner, Architect and Barton Malow Company that the product or system submitted is available and deliverable in accordance with the schedule requirements.
 2. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
 3. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 4. Barton Malow Company reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
 5. Coordinate each submittal as required with all trades and with all public agencies involved.
 6. Secure all necessary approvals from public agencies and others; signify by stamp or other means that all required approvals have been obtained.
- F. Category Format Process: Submittals for this Project will be classified and managed using the following categories.

Category 1 - A submittal that establishes a level of quality by complying with the manufacturer and manufacturer's designated identifier as called for in the Contract Documents. Provide a "Letter of Compliance" committing to the use of specified components. For record purposes, as part of the Letter of Compliance (or subsequently providing) a listing of those components actually used or to be used. The Architect will only respond to the Letter of Compliance if something is wrong. This letter of compliance is contractually binding.

Category 2 - A submittal that represents a number of components assembled to represent a specific project need, or standard components that require modification to also meet a specific Project need. Individual submittals that completely represent their intent of the Contract Documents are required for this category. This type of submittal will be processed in a manner through the typical circle. (Contractor to Barton Malow Company to Architect to Barton Malow to Contractor).

Category 3 - A submittal that confirms compliance with governmental, industry or otherwise specified standard and/or requirements. Required is a Letter of Compliance committing the Contractor to obtain for record and/or otherwise be responsible for meeting the requirements of the contract documents. The Architect will only respond to the Letter of Compliance if something is wrong. This letter of compliance is contractually binding.

After award of the Agreement Barton Malow Company will provide the Contractor with a listing of submittal items.

Designation of Category 1 or 3 does not relieve the Contractor from providing the appropriate detailed documentation to Barton Malow Company and to other trades for the purpose of coordination of Work.

PART 2 - SUBMITTAL REGISTER

2.01 SUBMITTAL REGISTER/SCHEDULE

- A. Barton Malow Company shall prepare and submit a listing of all items requiring submission, organized by specification section number, including the required close-out document submission recipients.
- B. Submittal listings may include such items as:

1. Contractor's, or Subordinate Parties shop drawings.
 2. Descriptive submittal types including, but not limited to:
 - a. catalog cuts/product data
 - b. diagrams
 - c. operation charts or curves
 - d. test reports
 - e. samples
 - f. operations and maintenance manuals, including parts list
 - g. certifications
 - h. warranties/guarantees
 - i. other close-out documentation required.
 3. The Contractor's submittal register returned to Barton Malow Company shall include as a minimum:
 - a. Submittal type and breakdown by specification section number of how the Contractor intends to submit the individual submittals for review (according to an intended sequence, area, etc.)
 - b. Scheduled date for initial submittal of item
 - c. Days required after return of approved submittal(s) to fabricate and deliver the specific item to the site (if applicable).
 4. Barton Malow Company shall have the right to require the Contractor to add and/or delete items on the submittal register at any time.
 5. Adequate time shall be allowed for review and approval and possible re-submittal of any item subject to approval. No delay damages or time extensions will be allowed for time lost in late submittals or re-submittals.
 6. The submittal register shall be coordinated with the schedule of values to insure delivery and payment requests are projected accurately. The Barton Malow Company will not be responsible for failure of the Contractor to properly schedule the process of material/product design, submittal, review, fabrication, delivery, storage and installation.
- C. The submittal register will become a part of the Agreement and the Contractor will be subject to requirements thereof.
- D. Each Contractor shall carefully coordinate preparation and processing of submittals to the performance of the Work so the Work will not be delayed by submittals. Coordinate and sequence different categories of submittals for the same Work and for interfacing units of Work, so that one will not be delayed by the coordination of the Architect's review with another. Drawings of component items forming a system or that are interrelated shall be correlated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled.
- E. Furnish approved copies of shop drawings, diagrams, templates, catalog cuts, technical data, etc. to other Contractors in other related Work designated by Barton Malow Company for the purposes of coordination of this Work.

PART 3 - SUBMITTAL REQUIREMENTS

3.01 GENERAL

- A. Each submittal shall show Contractor's review stamp, with handwritten signature, certifying review of the submittal, verification of field measurements and compliance with the Contract Documents.

B. Each submittal shall be accompanied with a Submittal Transmittal Form. A Submittal Transmittal Form is provided to the Contractor (See Section 01600 Forms). The following information shall be furnished by the Contractor on the submittal transmittal form:

1. Date
2. Project name and Architect's and the Barton Malow Company's project number
3. Names and Address of:
 - a. Architect
 - b. The Barton Malow Company
 - c. Contractor
 - d. Subcontractor (if applicable)
 - e. Supplier
 - f. Manufacturer
4. Identification of product or material
5. Technical Section number, clearly identified. On multiple submittals, a separate transmittal should be completed for each specification section on items being submitted.
6. Reference to construction drawings by drawing number
7. The quantity of each Shop Drawing, Product Data or Sample submitted
8. Notification of deviations from Contract Documents
9. Other pertinent data

Submittals not so transmitted will be returned un-reviewed. Re-submissions shall be so noted on the transmittal.

C. Unless noted otherwise on the submittal, all submissions will be considered to be "as specified."

3.02 REQUIRED QUANTITIES OF SUBMITTALS

A. The following number of originals and copies will be required for each type of submittal:

<u>Submittal Type</u>	<u>Submit</u>
1. Manufacturer's, supplier's or Contractor's shop drawings	<u>1</u> Reproducible Sepia & <u>4</u> sets of Blue line prints
2. Manufacturer's catalog sheets, product data, brochures, diagrams, schedules, performance charts, etc.	<u>7</u> copies
3. Samples	<u>4</u> samples (unless a specific number is required by specification)
4. Fire Performance Affidavits	<u>4</u> copies
5. Certifications	<u>7</u> copies
6. Warrantees/Guarantees	<u>7</u> copies
7. Test Reports	<u>7</u> copies
8. Operating and Maintenance Manuals/Data	<u>6</u> copies

B. Following review by the Architect, documents will be distributed as follows:

1. One copy to be retained by the Architect
2. One copy to be sent to Owner/Architect

3. One copy each of original and reviewed submittal to be retained by Barton Malow Company
4. Sepias and all remaining copies to be returned to Contractor

3.03 SUBMITTAL IDENTIFICATION

- A. This paragraph is included to explain the method for submittals identification using Section 08710. Finish Hardware and the Finish Hardware Schedule as an example.
- B. The Contractor shall assign submittal designations utilizing the following format and system.
- C. The number for the first shop drawing submitted under that Section would be 08710-1A, the "1" designating that this is the first submittal under Section 08710; and the "A" "signifying" that it is the first time a "finish hardware" schedule has been submitted to the Architect's office. If this "finish hardware" submittal is marked "rejected-resubmit", the re-submittal would retain the 08710-1 but "A" would be changed to 08710-1"B" to designate re-submittal; the next re-submittal 08710-1"C", etc. until this "finish hardware" item is approved.
- D. The second "finish hardware" submittal (door alarms) sent to the Architect's office for the first time would be 08710-2A, etc.

PART 4 - TYPES OF SUBMITTALS

4.01 SHOP DRAWINGS

- A. Submit Shop Drawings as single copies in the form of positive printing reproducible transparencies (commonly called sepia prints) suitable for reproduction use on dry print diazo type machines and the required number of blue lines. Sepia prints which cannot be reproduced will be returned to the Contractor for re-submittal.
- B. Provide Shop Drawings as complete submittals (no partial sets) on original drawings or information prepared solely by the fabricator or supplier. In no instance shall the Contract Drawings be reproduced for Shop Drawing submittals.
- C. Sheet sizes shall not exceed the size of the Contract Drawings or smaller than 8-1/2" X 11".
- D. Each sepia print shall have blank spaces large enough to accept two (2) 3" x 6" review stamps of the Contractor, the Barton Malow Company, and the Architect.]
- E. Each sepia print shall carry the following information:
 1. Project name, Architect's and Barton Malow Company's project number.
 2. Date and Revision Dates
 3. Names of and Address' of:
 - a. Contractor
 - b. Supplier
 - c. Manufacturer
 4. Identification of product or material.
 5. Relation to adjacent structure or materials.
 6. Field dimensions, clearly stated as such.
 7. Technical Section number.
 8. Applicable standards such as ASTM or Federal Specification.
 9. Identification of deviations from Contract Documents.
 10. Reference to construction drawings by drawing number and/or detail number.
- F. Submit sepia prints without folds either as flat sheets if size permits, or rolled in tubes.

4.02 PRODUCT DATA

- A. Product Data such as catalog cuts, brochures or manufacturer's preprinted sheets may be submitted in lieu of sepia prints if adequately identified. Submit the required number of copies of product data to the Barton Malow Company.
- B. Modify Product Data sheets to delete information that is not applicable to the Project. Provide additional information if necessary to supplement standard information.
- C. Product Data Sheets that are submitted with extraneous information not deleted and/or modified will be returned without review to the Contractor for re-submittal.

4.03 SAMPLES

- A. Provide physical Samples to illustrate materials, equipment or workmanship, and to establish standards by which completed work may be judged as required by the technical section.
- B. Provide Office Samples in sufficient size and quantity to clearly illustrate full range of colors, textures, etc. available and the functional characteristics of the product or material.
- C. Erect Field Samples or mock-ups as required by the technical sections and/or Barton Malow Company, at the Project site in a location designated by Barton Malow Company. Construct field samples complete, including Work of all trades required in finishing the Work. Provide Field Samples at the request of the Architect and/or Barton Malow Company where construction materials and/or methods deviate from the requirements of the intent of the Contract Documents or conventional construction practice.

4.04 CERTIFICATIONS

- A. Provide certifications as required by various technical sections on the Contractor's letterhead stationary.
- B. Certifications shall clearly identify the materials in reference and shall state that the material and the intended installation methods, where applicable, are in compliance with the Contract Documents for this project. Attach manufacturer's affidavits where applicable.

4.05 WARRANTIES/GUARANTEES

- A. Provide warranties and/or guarantees as required by the various technical sections and other Contract Documents on the Contractor's letterhead in accordance with the requirements in Section 01740.

4.06 OPERATING AND MAINTENANCE MANUALS

- A. Provide operating and maintenance manuals/data as required by the various technical sections in accordance with the requirements in Section 01730.

PART 5 - SUBMITTAL PROCESS AND RESPONSIBILITIES

5.01 CONTRACTOR'S RESPONSIBILITIES

- A. Before making submittals to Barton Malow Company, review each submittal, make changes or notations as necessary to conform to the Contract Documents, identify such review with review stamp and forward reviewed submittal with comments to Barton Malow Company for review. Return submittals not meeting contract requirements to Subordinate Parties and do not forward such submittals to Barton Malow Company.
- B. Deviations: Highlight, encircle or otherwise identify deviations from the Contract Documents on Submittals.

- C. Verify field measurements and product catalog numbers or similar data.
- D. Notify the Barton Malow Company and Architect, in writing at time of submission, of deviations in submittals from the requirements of the Contract Documents.
- E. After the Barton Malow Company's and Architect's review, distribute copies to other Contractors and supplier/fabricators with one copy to be maintained at the Project Site for reference use.
- F. Do not begin Work which requires submittals until return of submittals with Barton Malow Company's and Architect's stamp and initials indicating review.
- G. Contractor's responsibility for errors and omissions in submittals is not relieved by Barton Malow Company's or Architect's review of submittals.
- H. Contractor's responsibility for deviations in submittals from requirements of Contract Documents is not relieved by Barton Malow Company's or Architect's review of submittals unless Barton Malow Company and Architect give written acceptance of specific deviations.

5.02 BARTON MALOW COMPANY'S RESPONSIBILITIES

- A. Barton Malow Company will administratively review all submittals and coordinate them with information contained in related documents. Barton Malow Company's review is for general administrative purposes only and neither this review, nor any subsequent approval by Barton Malow Company of a submittal, shall relieve Contractor from its obligations to comply fully with the Contract Documents.
- B. Barton Malow Company will return to the Contractor, without review, all submittals not bearing the Contractor's review stamp or not showing it has been reviewed by the Contractor.
- C. Barton Malow Company will make changes or notations directly on the submittals, identify such review with its review stamp, sign and forward acceptable submittals to the Architect.
- D. After the Architect's review, Barton Malow Company will forward submittals to the Contractor and retain one copy. Contractor shall distribute copies with one copy to be maintained at the Project Site for reference use and other copies distributed to suppliers/fabricators. Contractor shall supply copies of reviewed submittals to Barton Malow Company in sufficient quantity to allow proper coordination of the Work.

5.03 ARCHITECT'S RESPONSIBILITIES

- A. Architect will review submittals within fourteen (14) Days after receipt, checking only for conformance with the design compliance of the Project and compliance with information given in the Contract Documents. If the submission is large and/or requires detailed or lengthy review by the Architect, additional time may be required.
- B. Architect will return to Barton Malow Company without review any submittals not bearing the Contractor's or Barton Malow Company's review stamp or not showing that it has been reviewed by the Contractor and Barton Malow Company.
- C. Architect will make changes or notations directly on the submittal, identify such review with its review stamp, obtain and record Architect file copy and return the submittal to Barton Malow Company.
- D. Submittals shall be identified and submitted by individual technical specification sections only.

5.04 RE-SUBMISSION REQUIREMENTS

A. For Shop Drawings:

1. Review initial drawings as required and submit as specified for initial submittal.
2. Indicate on drawings all changes which have been made other than those requested by Barton Malow Company or Architect.

B. For Product Data and Samples:

1. Resubmit new data and samples as required for initial submission.

5.05 ARCHITECT'S ACTION

A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows: **NEED TO CONFIRM WITH TMP!!**

1. **No Exceptions Taken:** Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
2. **Exceptions as Noted:** Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.
3. **Rejected:** Do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.

Do not use, or allow others to use, submittals marked "Rejected" at the Project Site or elsewhere where Work is in progress.

B. Informational Submittals: Architect will review each submittal and will not return it, or will reject and return it if it does not comply with requirements. Construction Manager will forward each submittal to appropriate party.

- C. Action Not Required: Submittals not required by the Contract Documents will not be reviewed and will be returned with notation "Action Not Required."
- D. Contractors are required to fill out and submit TMP Submittal Transmittals in addition to the BMC transmittal of their submittals, with EACH and EVERY submittal, no acceptance.

END OF SECTION 01330

**SECTION 01360
COORDINATION (GENERAL)**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 COORDINATION OF WORK/COOPERATION

- A. Each Contractor shall recognize the complex nature of the Project, the sequential nature of contracts and the concurrent and ongoing operations of the Owner and other contractors with the Work of this Project. All Contractors are required to review, discuss and coordinate their Work with the Work of other contractors as well as Barton Malow Company with regard to sequence, timing, built-in Work and equipment, layout, location, compatibility of materials and sizes and required clearances prior to beginning the work to avoid construction delays which impact the Owner's occupancy of the facility. Since the Work of each Contractor will depend upon interface with the Work of other contractors, changes in the scheduling, procedures, Work or Project conditions of a Contractor may affect the scheduling procedures, Work or Project conditions of other contractors.
- B. Each Contractor shall coordinate construction operations in various sections of the technical specifications to assure efficient and orderly installation of each part of the Work that depends on each other for proper installation, connection, fit and operation. Each Contractor shall:
1. Schedule 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.
 4. Provide to all other trades all information (drawings, diagrams, templates, embedments, etc.) necessary for the coordination of the Work.
- C. The completion of the Project within the prescribed time is dependent upon the close and active cooperation and open discussions of all those involved, therefore, it is expressly understood and agreed that each Contractor shall layout and install its Work at such time and in such manner as not to delay or interfere with the carrying forward of the Work of other contractors. Observation of the Work by others shall not relieve Contractor from its responsibility for coordination, supervision, or scheduling and direction of the Work.
- D. Contractors are to report in a prompt manner any interferences, discrepancies or incompatibilities discovered to Barton Malow Company, whose decision as to the Contractor at fault and as to the manner in which the matter may be resolved, shall be binding and conclusive on Contractors involved. Barton Malow Company may direct layout/ location changes as required to make the entire work fit together. Reasonable changes of this nature will not entitle any Contractor to an increase in contract price.
- E. Failure of a Contractor to notify other contractors and Barton Malow Company of a potential interference, incompatibility, or discrepancy and any failure to coordinate Work with that of other contractors prior to installation and/or fabrication shall be at the Contractor's risk.
- F. Due to the nature of the Owner's existing areas, the sequence of Work must be scheduled and coordinated with the Owner's ongoing operations to minimize disruptions and/or disturbances to the Owner's Work and at all times shall remain as secondary to the Owner's Work. Each segment of the Work shall be coordinated with Barton Malow Company prior to proceeding.

END OF SECTION 01360

SECTION 01400 QUALITY REQUIREMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Division 0, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.
- B. Specific attention is directed to the requirements described in Section 01450 Testing and Inspection Services.

1.02 DOCUMENT CONTROL PROCEDURE

Each Contractor is to provide Barton Malow Company its document control procedure to include drawing submittals and surveillance. In the absence of such a procedure, the Contractor will use the following procedure for document control.

“A log is maintained identifying the drawing revision status, issue date and distribution (internal and external). The transmittal issuing the changed documents will indicate what changes are made and indicate that the documents are approved for use. Contractor meetings include a review of approved drawings. The review is documented in the meeting minutes. Superintendent surveillance activities include monitoring Contractor drawing use.”

1.03 QUALITY CONTROL

- A. Each Contractor is responsible to provide the Owner with a completed quality product for its Work. Each Contractor shall be responsible for any costs associated with re-testing and re-performing the Work as a result of the Contractor's poor performance or workmanship or other failure to comply with the Contract Documents.
- B. All Work shall be done by persons qualified in their respective trades, and the workmanship shall be first-class in every respect. **Each Contractor is responsible for ensuring employees are appropriately trained.** All materials and equipment furnished shall be the best of their respective kinds for the intended use and unless otherwise specified, same shall be new and of the latest design.
- C. The Contractor shall provide Barton Malow Company, Owner and Architect access to the Work in preparation and progress wherever the Work is located at all reasonable times.
- D. Barton Malow Company and the Architect will have the authority to reject Work that does not conform to the Contract Documents or may require special inspection or testing, whether or not such Work is to be then fabricated, installed or completed. The Architect shall make all decisions with respect to questions concerning the quality or fitness of materials, equipment and workmanship.
- E. Failure by a Contractor to conduct its operations, means and methods and coordinate proper sequencing of the Work may cause the Owner to withhold payment or any other means deemed necessary to correct non-conforming Work.
- F. The Owner will employ without cost to the Contractors, a testing firm to perform such engineering laboratory services and on-site inspection as deemed necessary by the Owner, Barton Malow Company and/or the Architect to determine compliance with the requirements of the Contract Documents. This Work will not be a service to the Contractors for the performing of tests and checking of materials required of the Contractors.

- G. The testing firm will report directly to the Owner. Copies of test and inspection reports will be furnished to Barton Malow, IDS and the appropriate Contractors. The laboratory and its representatives will be instructed to promptly call to the attention of the Contractor, any instance of non-compliance with the requirements of the Contract Documents. Failure to so notify the Contractor shall not relieve the Contractor of any of its responsibilities for compliance or making good workmanship or materials which are not in compliance with the requirements of the Contract Documents.
- H. Each Contractor shall cooperate with the testing firm and provide labor to assist with sample preparations where applicable.

1.04 NOTICE OF NON-CONFORMANCE

- A. Barton Malow Company and the Architect may conduct observations/evaluations of the Contractor's Work. Barton Malow Company and/or Architect's reviews do not relieve the Contractor from compliance with the Contract Documents or necessary corrections for deficiencies thereof. Contractors whose Work does not meet the standards set by the Contract Documents will be notified by representatives of the Barton Malow Company using a Notice of Non-Conformance Form. The Contractor, upon receipt of the Notice of Non-Conformance, shall complete and return the form and provide the corrective actions necessary in a timely manner as outlined on the Notice of Non-Conformance.
- B. Control of nonconforming product: The Contractor shall establish and maintain documented procedures to ensure that product that does not conform to specified requirements is prevented from unintended use or installation. This control shall provide for identification documentation, evaluation, segregation (when practical), disposition of nonconforming product, and for notification to the functions concerned.
- C. Review and disposition of nonconforming Work: Nonconforming product shall be reviewed in accordance with documented procedures. It may be
 - a. reworked to meet the specified requirements,
 - b. accepted with or without repair by concession,
 - c. regraded products for alternative applications, or
 - d. reject or scrap and dispose of nonconforming work and replace
- D. The **Corrective Action Report (CAR) (CON 18.2)** is in Section 01600 Forms.

1.05 CONTRACTOR PERFORMANCE EVALUATION

- A. Barton Malow Company will be evaluating Contractor's performance and will provide feedback during the life of the Project, on Contractor's performance, for the purpose of improving Barton Malow Company's Contractor selection process for future project endeavors.
- B. Contractors will be requested to evaluate and provide feedback to Barton Malow Company on ways for improve on processes affecting the Contractors. None of these evaluations or feedback shall form part of the Agreement or Contract Documents.
- C. This Contractor Performance Evaluation form is generated by the CPS Database.

END OF SECTION 01400

SECTION 01450
TESTING AND INSPECTION SERVICES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.
- B. Except as indicated in this Section, refer to the various technical specification sections for specific testing requirements.

1.02 SCOPE OF INDEPENDENT TESTING LABORATORY SERVICES

- A. The Owner will employ and pay for the services of an Independent Testing and Inspection Laboratory to perform the following testing.
 - Soils
 - Concrete
 - Masonry
 - Steel
 - Paving
 - Roofing
 - HVAC Air and Hydraulic Balancing
 - Etc.
- B. Testing Laboratory inspection, sampling and testing is required as identified in the technical specifications.

1.03 QUALIFICATION OF TESTING AND INSPECTION LABORATORY

- A. Meet "Recommended Requirements for Independent Laboratory Qualification", published by AMERICAN COUNCIL OF INDEPENDENT LABORATORIES.
- B. Meet basic requirements of ASTM E-329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used In Construction" and ASTM D3740.
- C. Authorized to operate in the State in which the Project is located.
- D. Submit copy of report of inspection of facilities made by Materials Reference Laboratory of NATIONAL BUREAU OF STANDARDS during the most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.
- E. Testing Equipment:
 - 1. Calibrated at reasonable intervals by devices of accuracy traceable to either:
 - a. NATIONAL BUREAU OF STANDARDS
 - b. Accepted values of natural physical constants.

1.04 CONTRACTOR'S RESPONSIBILITIES

- A. Each Contractor shall be responsible to provide and pay for all other testing associated with its scope of Work. Tests shall be made by a qualified independent testing agency approved by the Owner and

Architect. Coordinate selection of the testing agency through the Barton Malow Company. The Contractor shall arrange and pay for the following services:

1. Inspections and tests specified as the Contractor's responsibility in the various sections of the Specifications.
 2. Inspections and tests required by the General Conditions including those tests required by codes, ordinances, or the approval authority of regulatory agencies.
 3. Inspection and tests performed for the Contractor's convenience.
- B. Contractor shall cooperate with the laboratory to facilitate the execution of its required services. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the Work.
- C. Contractor testing shall as a minimum comply with the requirements of this section.
- D. The Contractor is responsible to pay the cost of additional testing in the event that additional testing of the Contractor's materials, installation, and other Work is required by the independent testing laboratory because of test results not in compliance with the Contract Documents and/or additional testing required as a result of Contractor's negligence or poor workmanship.

PART 2 - EXECUTION

2.01 TESTING AND INSPECTION LABORATORY DUTIES

- A. Unless otherwise noted, the testing agency shall provide all required personnel and equipment as required for inspections and tests, for obtaining specimens and samples, and for delivery of specimens and samples to the laboratory when required.
- B. The Testing Laboratory shall cooperate with Barton Malow Company to provide qualified personnel after due notice.
- C. The Testing Laboratory shall perform specified inspections, sampling and testing of materials and methods of construction in accordance with specified standards and shall ascertain compliance of materials with the requirements of the Contract Documents.
- D. The Testing Laboratory shall promptly notify Barton Malow Company of observed irregularities or deficiencies of work or products.
- E. The Testing Laboratory shall promptly submit written report(s) of each test and inspection; submit one copy of report each to the Architect, Barton Malow Company, Owner, and Contractor with the following:
1. Date issued.
 2. Project title and number.
 3. Testing laboratory name, address and telephone number.
 4. Name and signature of laboratory inspector.
 5. Date and time of sampling or inspection.
 6. Record of temperature and weather conditions.
 7. Date of test.
 8. Identification of product and specification section.
 9. Location of sample or test in the Project.
 10. Type of inspection or test.
 11. Results of tests and compliance with Contract Documents
 12. Interpretation of test results, when requested by Architect.

2.02 LIMITATIONS OF AUTHORITY OF TESTING AND INSPECTION LABORATORY

- A. Laboratory is not authorized to:
 - 1. Release, revoke, alter or enlarge on requirements of Contract Documents.
 - 2. Approve or accept any portion of the Work, but may provide an expert opinion whereby the Owner, Architect and Barton Malow Company may make an informed decision as to acceptance or rejection.
 - 3. Perform any duties of the Contractor.
 - 4. Stop the Work.

PART 3 - CONTRACTOR RESPONSIBILITIES

3.01 CONTRACTOR SHALL:

- A. Cooperate with laboratory personnel, provide access to Work, to Manufacturer's operations.
- B. Secure and deliver to Barton Malow Company adequate quantities of representative samples of materials proposed to be used of which require testing.
- C. Provide to Barton Malow Company the preliminary design mix proposed to be used for concrete, and other materials mixes which require control by testing laboratory.
- D. Furnish copies of Products test reports as required.
- E. Furnish incidental labor and facilities as follows:
 - 1. To provide access to Work to be tested.
 - 2. To obtain and handle samples at the Project site or at the source of the product to be tested.
 - 3. To facilitate inspections and tests.
 - 4. For storage and curing of test samples.
- F. Notify Barton Malow Company sufficiently in advance of operations (24 hours minimum) to allow for laboratory assignment of personnel and scheduling of tests.
 - 1. When tests or inspections cannot be performed after such notice, reimburse Owner for laboratory personnel and travel expenses and all of Owner's other expenses incurred arising out of or resulting from Contractor's negligence.
- G. Employ and pay for the services of testing laboratory to perform additional inspections, sampling and testing required:
 - 1. For the Contractor's convenience.
 - 2. When initial tests indicate Work does not comply with Contract Documents.
- H. When the Contractor is providing the testing and prior to start of Work, submit testing laboratory name, address, and telephone number, and names of full time registered engineer and responsible officer. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of

National Bureau of Standards (NBS) during most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.

3.02 RE-TEST RESPONSIBILITY

- A. Where the results of required inspections, tests, or similar services prove unsatisfactory and do not indicate compliance with the requirements of the Contract Documents, the re-tests shall be the responsibility of the Contractor regardless of whether the original test was the Contractor's responsibility.
- B. Re-testing of Work revised or replaced by the Contractor is the Contractor's responsibility where required tests were performed on original Work. All costs and fees for re-testing shall be paid by the Contractor.
- C. Schedule delays and costs which are the result of non-conforming work or remedy will be the responsibility of the offending Contractor.

END OF SECTION 01450

SECTION 01500
INTERIM LIFE SAFETY PLAN

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

PART 2 - INTERIM LIFE SAFETY PLAN

2.01 PURPOSE AND POLICY

- A. **PURPOSE:** To provide interim life safety measures during a construction Project.
- B. **POLICY:** During a construction Project it shall be the responsibility of the Director of Facilities (or designee) and Barton Malow Company (through trade Contractors) to maintain compliance with the Life Safety Code NFPA Section 101. Compliance will be through the implementation of the following:

2.02 INTERRUPTION OF EXIT - EGRESS CORRIDOR

- A. Should construction of temporary structures for egress/exit be necessary:
1. Contractor will discuss with Barton Malow Company. Any changes to the means of egress should be reviewed through Barton Malow with the Owner and Architect to confirm appropriate travel distances to exits are maintained/established.
 2. Consumer and Industry Services will approve the planned structure before construction/implementation.
 3. Contractor will be responsible for maintaining the temporary egress/exit free of obstacles, debris, and equipment.
 - a. Entrance to and exists from existing buildings must be protected, kept free of restrictions or obstructions and maintained in full use at all times. Safety and well-being of occupants of the building and all other persons must be of prime concern.
 - b. Contractor shall provide temporary construction, including stairs, ramps, protected walkways, railings, lights and exit and direction signs, as required to maintain adequate exits from the existing building.
- B. Should an alternate egress route be necessary:
1. All departments will be notified via memo of location and duration thru the Owner's Project Manager.
 2. Access to secured areas will be provided by the Owner's Security department.
 3. Adjacent departments will be instructed by Security or Owner's Project Manager.
 4. Temporary exit and directional signage will be installed.

5. Fire drills will be increased to at least two per quarter per shift concentrating on departments adjacent to the affected area.

2.03 INTERRUPTION OF THE SPRINKLER SYSTEM

- A. Priority will be given to localized interruption of these systems on first shift Monday through Friday when full staff is available when any shut down is necessary:
 1. Contractor will provide a person on fire watch for the duration of this Work until the system is fully functional.
 2. All Contractors working on these systems must first notify the Owner through Barton Malow Company no sooner than twenty-four (24) hours prior to starting this Work.
 3. Adjacent departments will be notified of the interruption of service.
 4. Security staff will be notified.
- B. Interruption over-night or on off-shift.
 1. City of Eastpointe or warren Fire Department will be notified as to area affected and duration.
 2. East Detroit Public Schools will be responsible to inform their Insurance carrier being notified via their shut down policy.
 3. The Security Department will increase their records through the affected area.
 4. During Contractor Work on these systems, there will be an organized fire watch for all other on-going work.
- C. The sprinkler system tie-in will be tested by Contractor and witnessed by the Owner.
 1. Test will be accomplished by water flow through the inspectors test part until the flow switch makes and fire pump will start and/or alarm system activated.

2.04 INTERRUPTION OF FIRE/SMOKE DETECTION AND ALARM SYSTEM

- A. Contractor shall notify the Owner prior to arrival, stating the type of service and what is required of Facilities to assist in the service. Provide Facilities and Security with the following information:
 - Name of technician(s)
 - Name of Company and name of person authorizing service
 - Beeper Numbers (if available)
 - Approximate shut down time
 - Types of alarms possible
- B. Contractor shall maintain the operation of the total fire detection/alarm during the construction.
 1. It is acceptable for the Contractor to place a thin plastic cover over the detector head during high dust producing activities with Contractor's prompt removal upon completion of the work.
 2. At all other times the system will be returned to normal operating status.
- C. Should the fire/smoke detectors and alarms systems be interrupted:
 1. At least twenty-four (24) hours notice will be given.

2. Contractor will provide an organized fire watch.
3. Security will provide increased tours through the affected area, at least two per shift; problems noted will be brought to the attention of Director of Facilities.
4. Employees will be notified of area affected and the duration.
5. Temporary alarm pull stations will be established as a minimum should the interruption last more than 24 hours.
6. City of Eastpointe or Warren Fire Prevention Bureau will be informed of any interruption of service via the telephone operators.

2.05 CONSTRUCTION SITE MAINTENANCE

A. Interior Construction Area. Contractor **shall**:

1. Keep Work areas clean and organized.
2. Keep exit/egress corridors free of debris and materials.
3. At all times exercise every precaution for prevention of fires.
4. Provide fire protection for its Work. It shall have fire extinguishers of type and quantities as required.
5. Follow all provisions of the Contract Documents related to Hazardous Materials and substances.
6. Prohibit smoking on the interior construction site and only allow smoking in designated areas exterior of the building except where otherwise prohibited by law.
7. Provide temporary partitions adjacent to functioning departments that are smoke/dust tight and non-combustible.
8. Provide and maintain temporary enclosures, dust curtains, and all other necessary materials and equipment as required to prevent introduction of dust, dirt or debris into occupied portions of the building.
9. Not lock the construction area without approval of the Director of Facilities.
10. Maintain existing Fire/Smoke Barriers and compartments.

B. Exterior Construction Area - Contractor shall:

1. Keep the Project site neat and organized.
2. Properly and promptly dispose of waste materials.
3. Exercise caution to prevent debris or dust from blowing onto adjacent property or streets.
4. Protect excavations or other potentially dangerous site conditions using appropriate fencing materials and methods.
5. Store any Hazardous/flammable material as far from the building as possible.

6. Maintain protection at all exits to assure safe egress out of the building.
7. Maintain site clearance for access to the external fire department connections.

2.06 DOCUMENTATION – N/A

2.07 REFERENCES

- A. Life safety code NFPA 101, latest edition.

END OF SECTION 01500

SECTION 01510
FIRE PRECAUTIONS AND PROTECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 SUMMARY

- A. This Section describes the following requirements including:
1. Fire Precautions and Protection/Noxious Odors and Fumes
 2. (Temporary) Fire Standpipe System
 3. Noxious Odors and Fumes

PART 2 - FIRE PRECAUTIONS AND PROTECTION

2.01 FIRE PRECAUTIONS AND PROTECTION

- A. All Contractors and their Subordinate Parties shall assume full responsibility and take all necessary precautions to guard against and eliminate all possible fire hazards and to prevent damage to any construction work, building materials, equipment, temporary field offices, storage sheds, and all other property, both public and private. The location of the nearest corporation or public fire alarm box and the telephone number of the local fire department shall be conspicuously posted by Contractor throughout the field offices and in the building structure adjacent to its Work and it shall take precautions to prevent fire hazards in accordance with all fire protection and prevention laws and codes.
- B. Each Contractor's superintendent in charge at the Project, shall review the entire Project at least once a week to make certain the Contractor has adhered to the conditions and requirements set forth herein.
- C. No open fires shall be permitted. Contractors and their Subordinate Parties shall not be allowed to start fires with gasoline, kerosene or other highly flammable materials.
- D. Welding, flame cutting, or other operations involving the use of flame, arcs, or sparking devices will not be allowed without adequate protection and shielding without prior permission of the Owner through Barton Malow Company. All combustible and flammable material shall be removed from the immediate area. Material shall be protected with a fire resistant tarpaulin to prevent sparks, flames, or hot metal from reaching materials. Contractor shall provide the necessary personnel and fire fighting equipment to effectively control incipient fires resulting from welding, flame cutting, or other operations involving the use of flame, arcs or sparking devices. Each Contractor performing Work involving welding or open flame shall provide its own fire extinguishers in the immediate area of the Work.
- E. Not more than a one day supply of flammable liquids such as oil, gasoline, paint or paint solvent shall be brought into any building at any one time. All flammable liquids having a flash point of 110 degrees F or below, which must be brought into any building, shall be confined to Underwriter's Laboratories' labeled safety cans. The bulk supply of all flammable liquids shall be detached at least 75 feet from the building and from yard storage of building materials. Spigots on drums containing flammable liquids are prohibited on the project site. Drums are to be equipped with approved vent pumps.
- F. Combustible materials shall not be stored or left overnight within the confines of the permanent building. This includes all internal combustion engines using gas or fuel oil. Hoisting of flammable or combustible materials to the roof shall only be in quantities as needed for immediate use.
- G. Only fire resistant tarpaulins shall be used on this Project.

- H. The permanent fire protection water supply, fire extinguishing equipment, shut down and tie-ins between new and existing fire protection system shall be coordinated with the Owner and Barton Malow Company and be installed at the earliest possible date. Shut down of an existing fire protection system shall be for a minimum period of time. As each sprinkler system is completed and placed in service, the control valve shall be sealed. Permission to break seals and close sprinkler valves shall be given only by Barton Malow Company with approval of the Owner.
- I. Barton Malow Company will provide and maintain in working order at all times during construction not less than four (4) fire extinguishers conveniently located for each floor area having 50,000 square feet or less. One (1) additional fire extinguisher will be provided for each additional 15,000 square feet of floor area.
- J. Fire extinguishers provided by Barton Malow Company and Contractors shall be "all purpose", and not a water type, to meet the approval of the Fire Underwriter's Laboratory, and will be inspected at regular intervals and recharged if necessary.
- K. In areas of flammable liquids, asphalt or electrical hazards, extinguishers of the 15 lb. carbon dioxide type or 20 lb. dry chemical type shall be provided by the Contractor creating such hazard.
- L. Each Contractor agrees that, in the event of fire, all its workers and all Subordinate Parties workers anywhere on site will assist in extinguishing the fire
- M. Contractor's and their Subordinate Parties' shanties of combustible construction shall not be placed inside of any structure. Such shanties shall be detached at least seventy-five (75) feet from the building or as directed by Barton Malow Company with approval of the Owner. Totally incombustible shanties may be, if approved in writing by Barton Malow Company, located inside of the structure.
- N. Use of only Underwriter's Laboratory approved heaters and/or stoves is permitted in field offices or storage sheds and they shall have fire resistive material underneath and at the sides near partitions and walls. Pipe sleeves and covering shall be used where stove pipe runs through walls or roof.
- O. Flammable portions of construction shanties inside the structure must be painted inside and outside with "ALBI" fire retardant paint or other fire retardant paint of equal quality as approved by the Owner.

2.02 (TEMPORARY) FIRE STANDPIPE SYSTEM

- A. Permanent risers shall be installed as floor slabs are cast, with capped 2 1/2 inch hose valves on each floor and temporary cap or plug on top. One riser at a time shall be extended up so that remainder are available for use at all times.
- B. Provide permanent cross connections or provide temporary cross connections.

2.03 NOXIOUS ODORS AND FUMES

- A. All Contractors are notified that combustion engine equipment, tar kettles and any other items causing noxious odors or fumes will NOT be allowed in the building or near air intake louvers. If intake louver locations are in doubt, consult with Barton Malow Company.

END OF SECTION 01510

- D. Neither Barton Malow Company nor Owner assumes any responsibility for loss, theft or damage to the Contractor's materials or for damage to Work in place before the completion of the construction. In the instance of any such loss, theft or damage, the Contractor shall be responsible to renew, restore or remedy the Work, tools, equipment and construction in accordance with requirements of the Contract Documents without additional cost to Barton Malow Company.
- E. Barton Malow Company is not responsible for damage, liability, theft, casualty or other hazard to the automobiles or other vehicles, nor to injury, including death, to occupants of automobiles or other vehicles on the Owner's property.
- F. Barton Malow Company may establish additional security policies and procedures. All Contractors will be required to cooperate with Barton Malow Company in implementing these procedures.
- G. Site-parked equipment, operable machinery and hazardous parts of the new construction subject to mischief and accidental operation shall be inaccessible, locked or otherwise made inoperable when left unattended.

2.04 TEMPORARY FIELD OFFICE, FACILITIES AND PARKING

- A. The Owner may designate an area for construction trailers. Placement and scheduled duration shall be coordinated by Barton Malow Company. Each Contractor is responsible to verify that all field offices, trailers and storage sheds shall be in accordance with the local Fire Marshal having jurisdiction. Each Contractor shall arrange and pay for its own telephone hookup and use. Each Contractor shall arrange and pay for its own temporary electrical hook-up, water and toilets. The Owner shall pay for all power used for the Contractor's temporary field office and temporary electrical service. Construction personnel will be allowed to use the existing Owner parking facilities. Designated Contractors will be allowed to have on-site construction trailers. Construction trailers shall be limited to appropriate size.
- B. Contractors shall maintain the use of designated space for offices and sheds. This includes removal of weeds, debris, trash and clean-up of the area after removal of such temporary structures.
- C. Temporary field offices and sheds shall not be used for living quarters. .
- D. Offices and sheds shall be of suitable design, maintenance and appearance, and meet the approval of Barton Malow Company and all applicable local codes and ordinances.
- E. All temporary offices and sheds including foundations, must be removed within ten (10) days of written notice from Barton Malow Company including restoration of grade. Structures not removed in a timely manner will be removed by Barton Malow Company at Contractor's expense.

PART 3 - TEMPORARY CONSTRUCTION CONTROLS

3.01 TEMPORARY FENCING

- A. The DESIGNATED CONTRACTOR may provide temporary fencing with gates for required access and remove same at the completion of the Project as defined in the scope of work.
- B. The Contractors shall repair or replace fencing damaged as a result of its operation. Contractors shall remove and replace fencing and gates required to provide access for oversized items.
- C. Contractor's personnel are not allowed to work outside of the construction fence without permission of Barton Malow Company.

3.02 TEMPORARY TOILET FACILITIES

- A. The DESIGNATED CONTRACTOR shall provide and maintain temporary toilet facilities for the construction of the Project. The use of the Owner's existing permanent facilities is as described in Section 01140 Use of Premises.
- B. During renovation activities, Barton Malow Company may obtain, through the Owner, permission to use designated toilet facilities within the contract boundaries for construction use. The use of the Owner's existing permanent facilities outside the construction boundaries is strictly not allowed.

3.03 DRINKING WATER/TEMPORARY WATER

- A. The Owner will pay for water used on this Project and the Owner shall provide a source for drinking water. Each Contractor shall be responsible to provide containers, paper cups, ice, hoses, etc. for its needs.
- B. Immediately after award of the Agreement, the Mechanical or Plumbing Contractor shall furnish, install, maintain and subsequently remove a temporary hookup to the Owner's potable water system where directed by Barton Malow Company for construction purposes. The Contractor shall provide all temporary piping and approved backflow prevention as necessary for distribution from the source. Distribution of temporary water will be paid for by Contractors requiring same. A minimum of two (2) hose bibs shall be provided by the Mechanical or Plumbing Contractor as directed by Barton Malow Company.

3.04 ROOF PROTECTION

- A. Contractors and their Subordinate Parties, shall be responsible for damages to roofing, sheet metal and roof structure while performing Work. The Roofing Contractor will perform the repair Work at the expense of the Contractor responsible for the damage.
- B. All Contractors will protect adjacent existing roof surfaces while performing their Work. No construction materials will be allowed to be placed on existing roof surfaces without prior approval of the Owner through Barton Malow Company.

3.05 SCAFFOLDING

- A. Each Contractor is responsible for providing and maintaining any and all ladders, scaffolds and other staging as required to complete its Work. All such ladders, scaffolds and staging equipment shall be erected, maintained and subsequently removed by each Contractor in accordance with all applicable safety laws, rules and regulations.

3.06 WATER CONTROL

- A. All pumping, bailing or well point equipment necessary to keep excavations and trenches free from the accumulation of water during the entire excavating and backfilling progress of the Work shall be the responsibility of the Contractor performing said excavations and trenches due to its scope of Work.
- B. Each Contractor shall be responsible for keeping the building at grade and below free from water from the time the building backfill is completed until the building is watertight.
- C. Dispose of water in such a manner as will not endanger public health or cause damage or expense to public or private property. Abide by the requirements of any public agencies having jurisdiction.

3.07 TEMPORARY MATERIAL HOIST/ELEVATOR

Each Contractor is responsible for its own hoisting and material/ equipment movement costs as required to complete the Work under its Agreement.

- A. Barton Malow Company may operate and maintain a permanent elevator until such time as all material hoisting requirements have been met. Elevator requirements in excess of the capacity or size of this

elevator shall be provided by each Contractor at its expense. This elevator shall not be used for the placement of concrete, the transporting of workers, or other means inconsistent with its use as directed by Barton Malow Company. The operating cost for all overtime use of the elevator shall be paid by the Contractor requiring such services.

- B. The Elevator Contractor shall be obligated to extend warranty and guarantee periods on any permanent equipment used prior to Substantial Completion.
- C. Transportation of construction materials through the Owner's facility shall be accomplished in accordance with the requirements described in Section 01140 Use of Premises in such a manner so as to:
 - 1. Not damage any of the existing facility.
 - 2. Not impair the Owner's use of the facility.
 - 3. Not create any type of mess or additional cleaning requirements in Owner occupied areas.

The Owner's lifting equipment is not available for the unloading, conveying or installation of Contractor's materials.

3.08 TEMPORARY STAIRS, LADDERS, RAMPS, RUNWAYS, AND BARRICADES

- A. Each Contractor is to provide and maintain all necessary temporary stairs, ladders, ramps, and runways to facilitate conveyance of workers, materials, tools, and equipment for proper execution of its Work. All protection and safety barricades, devices, covers, and all other necessary items shall be provided by each Contractor as it relates to the safe conduct of its Work and protection of people and property in its Work area in accordance with applicable law.
- B. Any Contractor or Subordinate Party performing excavation Work shall be responsible to furnish, install and maintain temporary barricades and/or fencing of all open excavations until such time as the backfilling is complete. Flasher lights shall be provided on barricades and fencing by the Contractor as requested by Barton Malow Company and in accordance with applicable law. As a minimum, all barricades across roads and walks shall have lights on them in working condition.
- C. The Steel Contractor shall provide temporary guardrails at the building floor perimeters, interior shafts, all roof areas, or other openings, immediately after the erection of the steel frame and with the installation of metal decking. Protection shall be OSHA 29 CFR Part 1926.502 (B) "Guardrail Systems" and shall include but not be limited to two line rails and toe boards. This temporary protectors shall be left in place after completion of the steel frame for the use of all other Contractors. The Steel shall maintain and remove said guardrails and patch concrete. Each Contractor that disturbs any temporary protection for its Work is responsible to protect the area during its Work and to reinstall to its original condition the guardrail or barricade system for the protection of the workers and others until final construction of perimeter exterior wall and/or shaft openings is completed. All other protection and safety barricades, devices, covers, etc. shall be provided by this Contractor as it relates to the safe conduct of its Work in accordance with all local, state and federal regulations and the requirements of the Contract Documents, and shall be in accordance with the most stringent requirements.
- D. Each Contractor and its Subordinate Parties shall provide and maintain in good repair barricades, overhead protection, guard rails, etc., as required by law or necessary for the protection of the public and personnel engaged in the Work from hazards incidental to performance of the Work. Contractor shall do everything necessary to protect the Owner's employees, the public and workers from injuries and to protect vehicles and other property from damage.

3.09 TEMPORARY ELECTRICAL POWER AND LIGHT

A. Electrical Energy Costs

1. The Owner will pay for electrical energy to operate temporary electrical power and lighting for the duration of the project at designated locations. Temporary power will be provided free of charge.

B. Power Source

1. The Electrical Contractor shall provide, install, and pay for labor, equipment and materials required to make connections to the Owner's power source and to provide temporary electrical power and light distribution. The Electrical Contractor shall coordinate the location of the electrical power and lighting as directed by Barton Malow Company.
2. The Electrical Contractor will provide for each construction trailer(s) a 120/208 volt (or 120/240 volt), 100 ampere single phase power source to which the Contractor who occupies the trailer may connect. The cost of hook up and removal of temporary electrical service to trailer shall be each Contractor's responsibility.
3. Protection shall be provided for the power supply source complete with disconnect switch and other required electrical devices.
4. The Electrical Contractor will provide the temporary electrical service to the temporary hoist.

C. Rules and Regulations:

1. All temporary equipment and wiring for power, lighting and distribution requirements shall conform to OSHA requirements and be in accordance with applicable provisions of governing laws, codes, and ordinances.
2. All temporary wiring and distribution equipment shall be maintained so as not to constitute a hazard to persons or property.
3. Each Contractor is responsible to provide an assured grounding program in accordance with OSHA regulations for their own electrical power requirements.

D. Temporary Power Distribution:

1. The Electrical Contractor will provide and maintain temporary power distribution as follows:

Construction power shall be 120/208 volts, 3 phase, 4 wire plus ground. Provide the following outlets together with feeders, grounding, protective devices and ground fault interrupting devices.

- a. Power centers - on each floor of the new building, provide a minimum of two (2) power centers or not less than one (1) per 10,000 s.f. rated not less than 100 amperes at 120/208 volt, 3 phase. 4 wire plus ground. Within the remodeled areas, provide at least one (1) additional similarly rated power center. Locate the power centers such that each will serve approximately equal areas and as far as possible, each be in the center of the respective area served.
 - b. 120 volt duplex outlets - Provide weatherproof, G.F.I. protected, 20 ampere grounded outlets at a minimum rate equal to 1 - duplex outlet per 400 square feet. Outlets may be grouped in clusters of up to six duplex types with corresponding pro-rated increase in area served, provided that every portion of the construction and remodeled premises can be reached from the nearest outlet using a flexible cord no more that 50 feet in length.
2. As partitions are erected, locations of power distribution points shall be added or relocated.

3. Ground Fault Circuit Interrupter (GFCI) protection will be provided on all temporary power receptacles and, where possible, directly on the circuit breaker supplying temporary power as referenced in NEC 305-6(a).
4. The assured equipment grounding conductor program is only to be used on circuits greater than 20 amps as referenced in NEC 305-6(b).

E. Temporary Electrical Light Distribution:

1. The Electrical Contractor shall provide and maintain temporary electrical light distribution as follows:
 - a. Lighting shall be achieved using 120 volt guarded incandescent fixtures, or other suitable fixture types, to OSHA required minimum levels of illumination.
 - b. 120 volt temporary lighting as required in interior work areas. In addition to these minimum requirements provide adequate security lighting at guarded entrances outside storage areas, parking areas, and in areas of Contractor's and Architect's field offices and sheds.
2. As partitions are erected or other interferences which hamper achieving the minimum levels of illumination, locations of lighting distribution points shall be added or relocated.
3. Task lighting in addition to OSHA required lighting shall be provided by each Contractor.

F. Temporary Power and Light for Special Conditions:

1. Special conditions for temporary electrical power and lighting required by others shall be provided as follows:
 - a. Each Contractor requiring service of capacity or characteristics other than specified must make arrangements with the Electrical Contractor and pay for their own installation, removal, and service.
 - b. Where 3 phase power is required, the Contractor must pick up service at the distribution panel located outside the building addition.
 - c. The necessary grounded portable cords, lamps, light-stands, and fuses from the distribution outlets to points of use shall be provided by each Contractor to suit its own requirements.

G. Servicing of Temporary Power and Lighting:

1. The Electrical Contractor shall be responsible for the following:
 - a. Servicing, repairing and rearrangement of service equipment, temporary power, temporary lighting , and re-lamping.
 - b. Removal and disposal of temporary electrical power and lighting at completion of the Project or when so directed by Barton Malow Company and repair of damage caused by installation or removal.

H. Permanent Electrical Power and Lighting:

1. When permanent electrical power and lighting systems are in operating condition, they may be used for temporary power and lighting for construction purposes provided the Electrical Contractor:
 - a. Obtains the approval of the Architect and/or Owner through Barton Malow Company.

- b. Assumes full responsibility for operation of the entire power and lighting systems.
 - c. Verifies that warranty dates are established prior to usage of equipment and lamps.
 - d. Pays costs for operation, maintenance, and restoration of the systems.
2. As permanent power and lighting becomes available, these systems will generally supplant the appropriate portions of the temporary installation.

3.10 TEMPORARY HEATING AND WEATHER PROTECTION

A. Temporary heating requirements during the course of construction shall be divided into two categories as follows:

1. Cold weather protection.
2. Temporary heating.

B. Cold Weather Protection:

1. Heating required during the construction period prior to enclosure of the building shall be classified as "cold weather protection."
2. Each Contractor shall provide temporary heating and protection, necessary to allow its Work to continue during cold weather to meet the project milestone dates prior to building enclosure, including:
 - a. The heating of materials (such as water and aggregate) as well as space heating for protection of newly placed or built construction at required temperatures (but not lower than 50 degrees F) and for the time specified.
 - b. Flame-proofed tarpaulins and other materials used for temporary enclosures.
3. Masonry Contractor shall provide plan to allow Work to continue without regard to temperature.
4. Heat shall be provided by smokeless UL approved portable unit heaters, using fuel of types and kinds approved by Underwriter's Laboratories, Factory Mutual, and the Fire Marshal.
 - a. The Contractor shall provide fuel, power, maintenance, and attendance required for operation of portable heaters.
 - b. Interior or exterior surfaces damaged by the use of portable heating units shall be replaced with new materials at the responsible Contractor's expense.
5. It shall be the responsibility of each Contractor to protect its own Work.

C. Temporary Heating:

1. Daily construction heat required after the building is enclosed shall be classified as "temporary heating" and will be the responsibility of the MECHANICAL to install and maintain.
2. The building or buildings or any portions thereof shall be considered enclosed when in the opinion of Barton Malow Company:
 - a. The exterior wall system and temporary interior wall enclosures are in place.
 - b. Openings in exterior walls are covered to provide reasonable heat retention.

- c. The building is ready for interior drywall, masonry and plastering operations.
- d. The permanent roof is substantially installed.

The Carpenter shall provide and maintain the temporary interior wall enclosures. If the exterior wall system is not complete in time to provide building enclosure of a portion of the new structure as scheduled, the Carpenter shall provide and maintain temporary exterior wall enclosures of polyethylene and, in addition to exercising all other rights and remedies under the Contract Documents and law, Barton Malow Company shall be entitled to deduct the cost of such enclosures from the moneys due or to become due the Contractor(s) responsible for failure to meet said schedule.

- 3. In areas of the building or buildings where Work is being conducted, the temperature shall be maintained as specified in the various sections of the specifications, but not less than 50 degrees F for interior rough-in and not less than 60 degrees F during finishes installation. The temperature shall not be allowed to reach a level that will cause damage to any portion of the Work, including materials stored in the building, which may be subject to damage by low temperatures.
- 4. Until the permanent heating system, or suitable portion thereof, is in operating condition, provide sufficient and UL approved space heaters of suitable capacity to maintain required temperatures in areas where work is being conducted and materials are stored. Include all necessary maintenance, venting and attendance for this temporary heating to meet all applicable laws, rules and regulations.
- 5. When the permanent heating system, or a suitable portion thereof, is in operating condition, the system may be used for temporary heating, provided the Electrical Contractor:
 - a. Obtains approval from Barton Malow Company in writing for its use and any special provisions required for its temporary operation.
 - b. Assumes full responsibility for the entire heating system until final acceptance of the system by the Owner.
 - c. Uses supply only, not return if temporary heating utilizes the building's ductwork system.
 - d. Pays all costs for maintenance, attendance and restoration to "like new" condition of the system including final cleaning of equipment and ductwork and all necessary touch-up painting.
 - e. Turns over satisfactory evidence to Barton Malow Company showing the extended warranties from manufacturers and proper maintenance procedures.
 - f. Provides and maintains temporary filters, boxes and other parts used for the temporary condition and replaces same with the new permanent filters at time of occupancy consistent with the warranty provisions. The Electrical Contractor shall pay the cost of extending warranty and guarantee periods on any permanent equipment used prior to substantial completion.
- 6. Electrical power required for temporary heating will be furnished free of charge. The installation and service of the necessary temporary electrical feeders will also be the responsibility of the Electrical Contractor.

3.11 TEMPORARY ENCLOSURES

- A. Carpentry Contractor shall provide temporary (insulated) weather-tight closures of openings in exterior surfaces to provide acceptable working conditions and protection for materials, to allow for temporary heating, and to prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.

- B. The Owner shall provide temporary roofing as required to provide and maintain a watertight enclosure during construction.
- C. Carpentry Contractor shall provide temporary partitions and ceilings as required to separate Work areas from Owner occupied areas, to prevent penetration of dust and moisture into Owner occupied areas and to prevent damage to Owner's facilities and equipment.

END OF SECTION 01520

SECTION 01530
FIELD ENGINEERING AND LAYOUT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 LAYOUT OF THE WORK

- A. Each Contractor shall be responsible for the layout and engineering of its own Work from the established points and lines given by a registered surveyor employed by Owner and to coordinate with all other trades.
- B. Each Contractor is responsible for detailed and accurate layout of its own and its Subordinate Parties' Work to dimension from the principal lines, grades and levels set forth in the Contract Documents or the principal lines, grades and levels provided by a registered surveyor hired by Owner. Each Contractor shall make provisions to preserve all control points, such as monuments, stakes, bench marks or other datum points and shall replace at its own cost any of these which might be lost or displaced through its neglect.
- C. Contractors shall examine the conditions under which the Work is to be installed, shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Any errors, inconsistencies, omissions, discrepancies or conditions detrimental to proper performance of the Work that are discovered shall be reported to Barton Malow Company at once. Contractors are not to proceed until the required corrections are accomplished.
- D. The exactness of grades, elevations, dimensions, or locations given on any Drawings issued by Architect or the work installed by other contractors, is not guaranteed by Owner or Barton Malow Company. The Contractor shall, therefore, satisfy itself as to the accuracy of all grades, elevations, dimensions, and locations. In all cases of interconnection of its Work with existing or other Work, it shall verify at the site all dimensions relating to such existing or other Work. Any errors due to the Contractor's failure to verify all such grades, elevations, dimensions, or locations shall be promptly rectified by the Contractor without any additional cost to the Owner or Barton Malow Company..
- E. As the Work progresses, the Contractor shall prepare lay out drawings showing the exact locations of Work under its Contract as a guide to all trades. Prior to any installation, the separate Contractors shall exchange layout drawings and coordinate the Work and be subject to verification by all subsequent Contractors.
- F. As Work under each Agreement commences, the condition of preceding Work under other agreements shall be verified and accepted by each subsequent Contractor when appropriate. Verification may, at Barton Malow Company's discretion, include a joint review by the subsequent Contractor, previous contractor(s), and Barton Malow Company to note any corrective Work required, damage to previous Work, verification of elevations, tolerances, levels and plumbness, critical dimensions, surface conditions, and similar items affecting the Work under the Contract Documents and particularly items which prevent acceptance by the subsequent contractors. The verification review procedures and findings shall be documented in writing by subsequent Contractors, signed by all parties, and copies provided to the Barton Malow Company. Any corrective work necessary to satisfy requirements of the Contract Documents shall be performed promptly by the previous Contractor to prevent delay to the work under the subsequent Contracts. After corrective work is accomplished the subsequent Contractor shall furnish written acceptance of the work as noted above. Barton Malow Company's participation in a joint review under this paragraph shall in no event be deemed to constitute approval of any layout or other Work that fails to comply with the **Contract Documents**.

- G. Each Contractor shall be responsible to take such field measurements as may be required to determine the size of ordered material. In the event "guaranteed dimensions" are required, the Contractor shall promptly advise other Contractors through Barton Malow Company by use of drawings, templates or mock-ups of the required conditions.
- H. All Work, and in particular, piping, ducts, conduit and similar items, shall be neatly and carefully laid out to provide the most useful space utilization and the most orderly appearance. Except as otherwise indicated or directed, piping and similar Work shall be installed as close to above ceiling floor slabs and walls as conditions reasonably permit, located to prevent interference with other Work or with the use of the spaces. . Before Contractor installs a valve in an exposed location, it must make all efforts to install it in an accessible, concealed location. Contractors shall carefully plan the layout and review any questionable installations with Barton Malow Company.
- I. The Owner or Barton Malow Company may utilize a registered land surveyor to verify alignment and layout of certain portions of the Work. If that Work is out of tolerance or incorrect, the installing Contractor will be responsible for prompt correction of the Work to comply with the Contract Documents, along with all expenses incurred by Owner or Barton Malow Company in such verification process, including, but not limited to, the cost for the surveying services, as well as the additional time expended by Barton Malow Company personnel at standard billing rates.

END OF SECTION 01530

SECTION 01540 CUTTING AND PATCHING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 INSPECTION

- A. Before cutting existing surfaces, examine surfaces to be cut, including elements subject to damage or movement during cutting and patching work. Report any unsatisfactory or questionable conditions to Barton Malow Company in writing.
- B. Before proceeding, meet at the site with Barton Malow Company and the parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference, conflict and possible effects on the Owner's existing operations. Coordinate procedures, temporary support, methods of dust and water protection, etc. and resolve potential conflicts before proceeding.
- C. When working in and around existing buildings, if any hazardous material is encountered or is suspected to be present, Barton Malow Company must be notified and Work in the affected area is to stop as described in Section 00840 Hazardous Materials until further direction is given by Barton Malow Company or the Owner.

1.03 PREPARATION

- A. Provide adequate temporary support as necessary to assure the structural value and integrity of the affected portion of the work. Where specified or required, submit temporary support methodologies to the Architect for approval.
- B. Provide devices and methods to protect adjacent areas or other portions of the Project from damage including dust protection, water protection, exposure, maintain excavations free of water, and all other devices and methods as necessary to provide protection from the elements.

1.04 EXECUTION

- A. The use of explosives is prohibited on this Project.
- B. Each Contractor on behalf of itself and its Subordinate Parties is responsible for the cutting of all holes and openings through existing walls, partitions, ceilings, floors and roofs as necessary for the installation of its Work as specified in the Contract Documents. Holes and openings shall be neatly cut and of minimum size to allow the Work to be installed. Execute cutting and demolition by methods which will prevent damage to other Work, and will provide proper surfaces to receive installation of repairs.
- C. Execute work in such a manner as to minimize disruptions to or interference with the Owner's normal operations or functioning in the existing buildings and provide all means necessary to provide safety and convenience of those employed in and about the premises.
- D. Each Contractor is responsible for patching of all holes and openings it makes. Fit work should be airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces. Patching is to match adjacent surfaces in materials and finish. Each Contractor is to utilize only tradesmen skilled in the specific finish and material involved in making the patches. All patching is to be done in a neat and workmanlike manner to the satisfaction of Barton Malow Company. Defective Work shall be corrected at no cost to the Owner and Barton Malow Company.

- E. Where new Work connects with existing Work, Contractor shall do all necessary cutting and fitting required to make a satisfactory connection with the Work to be performed so as to leave the entire Work in finished and workmanlike condition. Furnish all labor and materials to this end, whether or not shown or specified. All measurements must be verified at the site.
- F. Employ the original installer and fabricator, when possible, to perform cutting and patching for:
 - 1. Weather-exposed or moisture-resistant elements.
 - 2. Sight-exposed finished surfaces.
- G. Execute fitting and adjustment of products to provide a finished installation to comply with the specified products, functions, tolerances and finishes.
- H. Contractor shall restore Work which has been cut or removed and shall install new products to provide completed Work in accordance with the Contract Documents. Each Contractor will be responsible to pay the appropriate contractor as designated by Barton Malow Company for restoring any portion of the Project that is disturbed, including but not limited to, slabs, walls, ceilings, fire rated partitions, spray-on fireproofing, and finishes, to their original state as a result of Contractor's action.
- I. Refinish entire surfaces as the Contractor's Work scope requires to provide an even finish to match adjacent surfaces and finishes.
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish the entire unit.
- J. Removal and replacement of ceilings not scheduled to be replaced shall be the responsibility of the Contractor requiring access.
- K. Contractor shall be held responsible for reckless cutting of holes in slabs, walls or other finishes, or for scraping off areas of fireproofing larger or greater than that which is necessary for installation of its Work.

END OF SECTION 01540

**SECTION 01550
CLEAN-UP AND FINAL CLEANING**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Division 0, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 SUMMARY

- A. Execute final cleaning at completion of the Work, as required by this Section. For Contractor's daily clean-up, dust control and rubbish removal operations during construction, refer to Section 01520 Temporary Construction Controls.

1.03 DISPOSAL REQUIREMENTS

- A. Conduct final cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.
1. Do not burn or bury rubbish and waste materials on Project site.
 2. Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary drains.

PART 2 - BARTON MALOW SITE CLEAN-UP/RUBBISH REMOVAL PROCEDURE

2.01 PURPOSE

- A. An effective and efficient clean-up procedure on the Project site contributes to both the productivity and safety of all those involved. The following requirements are intended to provide a satisfactory and equitable method to manage and accomplish project clean up.

2.02 REQUIREMENTS

- A. General: Each Contractor shall be responsible for daily, weekly and final clean-up of its Work and the work of its Subordinate Parties as defined herein. The cost of this requirement shall be included in the Contractor's Bid Proposal. Contractor is required to comply with applicable labor agreements and jurisdictional rules in the hiring of laborers to perform its clean up obligations under the Contract Documents. Each Contractor will be responsible for control of dust generated by its operations on a daily basis. Roadways must be maintained clear of all debris at all times. Contractors shall only use cleaning materials which will not create hazards to health or property and which will not damage surfaces. Only those cleaning materials and methods recommended by the manufacturer of the surface material to be cleaned shall be used. Any sweeping compounds used in cleaning operations shall not leave residue on concrete floor surfaces that may affect installation of finish flooring materials
- B. Dumpsters: The project contractors will provide and maintain the job site dumpsters for unidentifiable debris for use as specified below. Each Contractor and its Subordinate Parties shall be responsible for daily clean-up, removal and placement in dumpsters of all debris and waste resulting from its operations. No overfilling of dumpsters will be allowed. All adjacent areas are to be kept clean. Excavation, demolition, masonry, drywall and hazardous waste materials are NOT to be placed in Barton Malow Company's dumpster. Each Contractor will be responsible for removing its own excavation, demolition, masonry, drywall and Hazardous Materials from the site in strict accordance with applicable laws and regulations regarding disposal. Contractor shall indemnify, defend and hold harmless the Owner and Barton Malow Company from claims, damages, suits, costs, or expenses of

any kind (including attorney's fees and costs) arising out of, resulting from or in connection with Contractor's misuse of dumpsters furnished by the owner.

- C. Daily Clean Up: Each Contractor shall be responsible, DAILY for the clean -up, transport and removal from the site of identifiable debris including but not limited to, bulky debris, packaging, containers, unused materials and equipment, (i.e., masonry and concrete materials, drywall, steel, crates, carton, demolition debris, other packaging, and combustible items). No piles of debris shall be left in the building overnight. The cost of any overtime premium required to remove debris immediately at the end of each workday shall be included in the Contractor's Base Bid.

Each Contractor must handle materials in a controlled manner during clean-up and all other operations so that dust and other contaminants resulting from the cleaning or disposal process will not affect the Owner's operations or equipment or the work or equipment of any other Contractor on the site. Each Contractor is responsible to leave its Work and work area in a clean condition. This includes, but is not limited to, removal of all grease, dust, dirt, stains, labels, fingerprints and other foreign matter.

- D. Weekly Clean Up: Each Contractor, while on site, shall provide to Barton Malow Company one (1) person for each five tradesmen (or portion thereof) employed at the site, one day per week, for up to four (4) hours, for the exclusive purpose of performing overall project weekly clean-up of unidentifiable debris. The cost of this (these) person(s) shall be included in Contractor's bid. The weekly clean-up Work shall include sweeping, loading and disposal of miscellaneous debris such as mud tracked through the building, drinking cups, bottles, lunch wrappers and other unidentifiable debris. Trash and debris from this operation shall be placed in the dumpster(s) provided by the contractors. Barton Malow Company will furnish sweeping compound to hold down dust during the weekly clean up.
- E. Final Clean Up: Final clean-up, will be done at a time designated by Barton Malow Company. Normally, Final Clean Up will occur before punchlist inspection or prior Owner Occupancy turnover. The Contractor's duties for Final Cleaning are set forth in Part 3.01 below.
- F. Use of Owner's Facilities: The Owner's facilities are not to be used by Contractor for the disposal of trash or debris from its Work.
- G. Failure to perform Clean Up: If any Contractor or its Subordinate Parties fails to maintain a satisfactory clean-up program, Barton Malow Company will issue written notice, to the responsible Contractor, that the necessary clean-up must be performed within twenty-four (24) hours after the notice is given. The establishment of a definite deadline for the removal of debris and rubbish will supersede the necessity for any formal notification that such work must be done. If Contractor(s) fail to perform the clean-up, by the deadline, Barton Malow Company may perform clean-up on the Project and back charge the responsible Contractor(s) for the costs. If necessary in order to remove unidentifiable debris beyond what is removed during weekly clean up, Barton Malow Company will perform such clean-up and shall pro-rate the cost among the Contractors in its discretion, based on Contractor(s) type of work and manpower on site. Back charges may be deducted from the monthly invoices of the Contractor(s) and/or final payment.
- H. Hazardous Materials: Contractors or Subordinate Parties must dispose of Hazardous Materials in strict accordance with applicable federal, state, and local laws and regulations. Hazardous Materials may not be placed in dumpsters and/or containers not so designated for such placement.

PART 3 - EXECUTION

3.01 FINAL CLEANING

- A. The Owner will employ an adequate number of personnel for final cleaning. Final Cleaning consists of the following Work:

- 1) Removal of grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and all other foreign materials from sight-exposed interior and exterior surfaces.
 - 2) Vacuuming all carpets and spot cleaning any stains. Cleaning and waxing VCT floors.
 - 3) Washing and shining glazing and mirrors.
 - 4) Polishing glossy surfaces to a clear shine.
 - 5) Dusting cabinet work and removing foreign markings.
 - 6) Broom cleaning exterior paved surfaces and raking clean other surfaces of the grounds.
- B. In addition to the tasks set forth above, each Contractor shall be responsible for the following for its Work.
- 1) Prior to final completion or Owner occupancy, whichever occurs first, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces, and all Work areas, to verify that the entire Work is left in a broom clean condition and that all Final Cleaning as set forth above has been performed.
 - 2) Tunnels and closed off spaces shall be cleaned of packing boxes, wood frame members and other waste materials used in the construction.
 - 3) The entire system of piping and equipment shall be cleaned internally. Contractors installing piping or equipment shall open all direct pockets and strainers, completely blowing down as required by the technical specifications and the manufacturers' instructions, and shall clean strainer screens of all accumulated debris.
 - 4) Tanks, fixtures and pumps shall be drained and proved free of sludge and accumulated matter.
 - 5) Temporary labels, stickers and similar items shall be removed from fixtures and equipment. Unless otherwise directed in the technical specifications, Contractors shall not remove permanent name plates, equipment model numbers, ratings, or other items intended to be permanently affixed to the fixture or equipment.
 - 6) Heating and air conditioning equipment, tanks, pumps and traps shall be thoroughly cleaned and new filters or filter media installed.
 - 7) Before being placed in service, domestic water distribution systems, including those for cold water, drinking water and the hot water system shall be chlorinated. Review Technical Specifications for Products and Procedures.

END OF SECTION 01550

**SECTION 01600
FORMS**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Specific attention is directed to all Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section and relate to various forms referenced for the project.

1.02 USE OF FORMS

- A. Upon award of the Agreement, the various forms described and referenced in the Project Manual will be provided by Barton Malow Company and therefore are not bound in the Project Manual.

1. Copies of forms are available for inspection at Barton Malow Company.

END OF SECTION 01600

00620 Insurance

- Certificate of Insurance (ACORD) Form

00810 Safety and Loss Control Program

- Trade Contractor Safety Certificate (**CON.7.9**)

01290 Payment Procedures

- Application and Certificate for Payment (**CON.27.1**) and Continuation Sheet
CON.27.2 – Not Included
- Consent of Surety to Reduction In or Partial Release of Retainage (**CON.26.6**) – **Not Included**
- Payment schedule (**PSI.10.1**)
- Payment Request for Stored Materials Form (**CON.26.5**)
- Acknowledgment of Payment and Partial Unconditional Release Form (**CON.26.3**)
- Unconditional Final Release and Waiver Subcontractor/Materialman Form (**CON.26.4**)
- Sworn Statement Form (**CON.26.2**)

01250 Changes in the Work

- PCO- Notice to Proceed
- PCO- Quotation Only
- Change Order Form (**CMS.9.1 or CMS.9.2**)

01320 Communications

- Trade Contractor's Daily Report Form (**CON.14.4**)
- Request For Information Form (**CON.25.2**)
(in company approved software, if necessary)

01330 Submittals

- IDS Submittal Transmittal Form

01400 Quality Requirements

- **Corrective Action Report (CAR)/Notice of Non-Conformance (NCR) (CON.18.2)**

01700 Contract Close-out

- Consent of Surety Company to Final Payment Form (**CON.26.7**) – **Not Included**

- Consent of Surety to Reduction in or Partial Release of Retainage Form (**CON.26.6**) – **Not Included**
- **Certificate of Contract Completion Form (CLO.7.5)**

01720 Project Record Documents

- **Closeout Submittal (CLO.7.2)**

01740 Warranties and Guarantees

- **Contractor's Guarantee (CLO.7.3)**

01750 Systems Demonstration, Training and Start-up

- **Equipment/Systems Acceptance Form (CLO.2.1)**
- **Owner Training Register (CLO.2.2)**

END OF SECTION 01600

**SECTION 01630
PRODUCT SUBSTITUTIONS**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 WORK INCLUDED

- A. Furnish and install Products specified, under options and conditions for substitutions stated in this Section.

1.03 BIDDER'S OPTIONS

- A. For products that are specified only by reference standard, select Product meeting that is standard by any manufacturer.
- B. For Products specified by naming several Products or manufacturers, select any one of products and manufacturers named which complies with Specifications.
- C. For Products specified by naming several Products or manufacturers and stating "or equivalent", or "or equal", or "or Architect approved equivalent", or similar wording, submit a request as for substitutions, for any Product or manufacturer which is not specifically named for review and approval by the Architect.
- D. For Products specified by naming only one Product and manufacturer, there is no option and no substitution will be allowed.
- E. Visual Matching: Where specifications require matching an established sample, select a product (and Manufacturer) that complies with requirements and matches Architects sample. Architect's will be final on whether a proposed product matches satisfactorily.

PART 2 - SUBSTITUTION PROCESS

2.01 SUBSTITUTIONS

- A. Base Bid shall be in accordance with the Contract Documents.
1. Substitutions for products may be made during the bidding period by submitting completed Substitution Request Form and substantiating product data/literature a minimum of ten (10) Days prior to Bid date to Barton Malow Company who will then forward to the Architect.
 2. Architect will consider requests from the Bidder for substitution of products in place of those specified as set forth in this section.
 3. Those submitted the specified calendar days prior to Bid Date will be included in an addendum if acceptable.
 4. After the end of the bidding period, requests will be considered only in case of Product unavailability or other conditions beyond the control of Contractor.
 5. Bid Proposals shall not be based on assumed acceptance of any item which has not been approved by addendum.

- B. Bidders are required to submit a separate Substitution Request Form for each proposed substitution. Each substitution request should be accompanied by the following supporting documentation:
1. A full explanation of the proposed substitution.
 2. Complete data substantiating compliance of the proposed substitution with the requirements stated in the Contract Documents.
 - a. Product identification, including the manufacturer's name and address.
 - b. Manufacturer's literature; identifying:
 - 1) Product description and technical information.
 - 2) Reference standards.
 - 3) Performance and test data.
 - 4) Installation instructions, operating procedures and other like information.
 - c. Samples, as applicable.
 - d. Names and addresses of similar projects on which product has been used, and date of each installation.
 3. Itemized comparison of the proposed substitution with the product specified, listing all significant variations.
 4. Data relating to changes in delivery or construction schedule.
 5. A list of all effects of the proposed substitution on separate contracts.
 6. Accurate cost data comparing the proposed substitution with the product specified.
 - a. Amount of any net change to Contract Sum.
 7. Designation of required license fees or royalties.
 8. Designation of availability of maintenance services and sources of replacement materials.
- C. Substitutions will not be considered for acceptance when:
1. They are indicated or implied on shop drawings or product data submittals without a formal request from Bidder.
 2. Acceptance will require substantial revision of Contract Documents.
 3. In judgment of Architect, do not include adequate information necessary for a complete evaluation.
 4. If requested after Contract Award directly by a subcontractor or supplier, except for special or unusual circumstances reviewed by the Contractor with Barton Malow Company.
- D. Substitute products shall not be ordered or installed without written acceptance of Architect.
- E. Architect will determine acceptability of proposed substitution.

2.02 BIDDER'S REPRESENTATION

- A. In making formal request for substitution the Bidder represents that:
1. It has investigated the proposed product and has determined it is equivalent to or superior in all respects to the product specified.

2. It will provide same warranties or bonds for the proposed substitution as required for the product specified.
 3. It will coordinate installation of the accepted substitution into the Work, and will make such changes as may be required for the Work to be complete in all respects.
 4. It waives all claims for additional costs caused by or arising from the substitution which may subsequently become apparent.
 5. Cost data is complete and includes related costs under its Agreement, but not:
 - a. Costs under separate contracts.
 - b. Architect's costs for redesign or revision of Contract Documents.
 6. Cost data need not be submitted, if request is for inclusion in an addendum. Requests after the Agreement is awarded shall contain a complete cost comparison.
- B. Any modifications necessary as a result of the use of an approved substitute shall be paid by the Contractor proposing the substitution.
- C. Any additional engineering costs required to be performed by the Architect to approve, implement or coordinate the substitution above reasonable review services, shall be paid by the Contractor proposing the substitution.
- D. Under no circumstances will the Architect be required to prove that a product proposed for substitution is or is not equal to the quality of the product specified.

2.03 ARCHITECT'S DUTIES

- A. Review requests for substitutions with reasonable promptness.
- B. Coordinate review/approval of "Architect Approved" substitutions with the Owner prior to notifying the Barton Malow Company.
- C. Issue a written instruction of decision to accept the substitution.
- D. Substitution requests that are not approved will be returned to the party submitting the request with an explanation for the rejection.

2.04 SUBSTITUTION REQUEST FORM

- A. The form is attached to this Section.
- B. **SUBSTITUTIONS WILL BE CONSIDERED ONLY WHEN THE ATTACHED FORM IS COMPLETED AND INCLUDED WITH THE SUBMITTAL WITH ALL BACKUP DATA.**

SUBSTITUTION REQUEST FORM

TO: Barton Malow Company, East Detroit Public Schools project.

We hereby submit for your consideration the following product instead of the specified item for the above Project:

DRAWING NO.: _____ **DRAWING NAME:** _____

SPEC. SECT. **SPEC. NAME** **PARAGRAPH** **SPECIFIED ITEM**

Proposed Substitution: __

Attached complete information on changes to Drawings and/or Specifications which proposed substitution will require for its proper installation.

Submit with request all necessary samples and substantiating data to prove equal quality and performance to that which is specified. Clearly mark manufacturer's literature to indicate equality in performance.

CERTIFICATION OF EQUAL PERFORMANCE AND ASSUMPTION OF LIABILITY FOR EQUAL PERFORMANCE

The undersigned states that the function, appearance and quality are equivalent or superior to the specified item.

Submitted by:

Signature Title

Firm

Address

Telephone Date

Signature shall be by person having authority to legally bind his/her firm to the above terms. Failure to provide legally binding signature will result in retraction of approval.

For use by Architect:

___ Accepted ___ Accepted as Noted

___ Not Accepted ___ Received Too Late

___ Insufficient Data Received

By: _____

Date: _____

Fill in Blanks Below:(Attach additional sheets as required)

For Use by Owner:

___ Accepted ___ Accepted as Noted

___ Not Accepted ___ Received Too Late

___ Insufficient Data Received

By: _____

Date: _____

- A. Does the Substitution affect dimensions shown on Drawings?
Yes ___ No ___ If yes, clearly indicate changes: _____
- B. Will the undersigned pay for changes to the building design, including engineering and detailing costs caused by the requested substitution?
Yes ___ No ___ If no, fully explain: _____
- C. What affect does substitution have on other contracts or other trades?

- D. What affect does substitution have on the delivery and construction schedule? _____
- E. Manufacturer's warranties of the proposed and specified items are: ___ Same ___ Different
If Different, explain on an Attachment
- F. Reason for Request: _____
- G. Itemized comparison of specified item(s) with the proposed substitution; list significant variations:

- H. Accurate cost data comparing proposed substitution with product specified:

- I. This substitution will amount to a credit or an extra cost to the Owner of: _____ dollars
(\$ _____)

END OF SECTION 01630

SECTION 01700 CONTRACT CLOSE-OUT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.
- B. Comply with requirements stated in Sections 00500, 00700, 00800 and in Specifications for administrative procedures in closing out the Work. Where this Section conflicts with another Section or the technical Specifications, the provision granting greater rights or remedies to Owner, or imposing the greater duty, standard, responsibility or obligation on Contractor shall govern.

1.02 DEFINITIONS

- A. Close-out is the process of organizing the general project requirements near the end of contract time to evidence the completion of the Work. The time of close-out directly relates to "Substantial Completion." It can either be a single time period for the entire Work, or a series of time periods for individual parts of the Work, which have been certified as Substantially Complete at different dates. Unless otherwise defined in the Contract Documents,

Substantial Completion of the Work is the stage in the progress of construction when the **Work** is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

Substantial Completion of the Project is the stage when Project construction is sufficiently complete so the Owner can occupy or utilize the project for its intended use.

Final Completion of the Project is the stage when Certification of Substantial Completion has been issued by the Architect according to the terms and conditions of the Contract Documents and approval of the Project Certificate for Payment has been received from the Architect (or Owner) in order to release final payment to the Contractor.

1.03 PROJECT COMPLETION

- A. Contract requirements shall be met when construction activities have successfully produced, in this order, these three Project completion milestones:
 - 1. Substantial Completion
 - 2. Final Completion
 - 3. Final Payment

PART 2 - CLOSE-OUT PROCESS

2.01 CONTRACT CLOSE OUT DOCUMENTATION

- A. Before processing the completion of all contractual responsibilities of a Contractor, and to expedite final payment to a Contractor, a detailed review of all contractual requirements will be performed along with compiling a list of deficiencies. Refer to Sections 00500, 00700 and 00800 for detailed requirements. Effective and timely contract close-out is the objective, but it also requires efficient and timely action of the Contractor to provide the necessary punchlist completion Work, documents, materials, close-out documentation, and all other requirements set forth in the Contract Documents.

2.02 CLOSE-OUT PROCEDURE

- A. The following procedure and forms will be used to progress through the contract close-out stage in a productive and timely manner.

Step 1 PREPARATION FOR CONTRACT CLOSE-OUT

During the course of the Project, the Contractor will thoroughly review the Contract Documents as it relates to the requirements and obligations and gather and submit to Barton Malow Company the proper submittals, shop drawings, material certifications, waivers, certificates of insurance, bonds, and other contractual requirements impacting contract close-out.

Step 2 INITIATING THE FINAL CLOSE-OUT PROCESS

When nearing 75% completion of the Work, the Contractor will review the status of the Close-Out process with Barton Malow Company. The Contractor's contractual responsibilities will be reviewed and outstanding close-out and other submittals identified.

Step 3 OBTAINING THE CERTIFICATE OF SUBSTANTIAL COMPLETION

As the Contractor is nearing the completion of the Work and after concurrence with Barton Malow Company, it shall submit a written request for Substantial Completion, all required documentation as outlined, and a listing of all minor deficiencies yet to be completed.

The following documents are the minimum required at the time of request for Substantial Completion. Contractor shall also submit all additional documentation as required in the Contract Documents:

- a. AIA G704 Certificate of Substantial Completion – As prepared and issued by project Architect
- b. As-built records (see Section 01720)
- c. Operation and Maintenance Manuals (see Section 01730)
Typically, all O&M manuals will be submitted to the Owner six months prior to acceptance of equipment systems or building occupancy.
- d. Keys, Maintenance Stock, and Spare Parts - quantities as required in the specifications
- e. Test and Start-up/Owner Training Sessions (see Section 01750)
- f. Submission of Permits and Approvals (i.e., Fire Marshal, Department of Public Health Approvals, etc.)
- g. Guarantee and Warranties (see Section 01740)
- h. Punchlist (list of work to be completed or corrected)

Once Barton Malow Company has received all required documents they will be forwarded to the Architect and Owner. Barton Malow Company will review the Contractor's request for Substantial Completion; all above documentation, and list of deficiencies, add appropriate comments, and forward to the Architect and/or Owner for review. In conjunction with the Contractor, Barton Malow Company will establish a schedule for the completion of all listed items, which in no event shall exceed any time periods established in the Contract Documents for Final Completion.

When the Architect and/or Owner determine(s) that the Work is substantially complete, the Certificate of Substantial Completion shall be issued to the Contractor.

Step 4 CONTRACTOR COMPLETES PUNCHLIST WORK

Each Contractor shall submit a letter certifying all punchlist items are completed, in a manner acceptable to the Owner, Barton Malow Company and the Architect.

Step 5 FINAL INSPECTION NOTICE

Each Contractor is to forward (**written notice and accompanying documentation**) to Barton Malow Company that Work is ready for final inspection and acceptance. Barton Malow Company will forward written notice to the Architect if Barton Malow Company is in agreement that Work is complete. The Architect will perform a final inspection and sign off on the punchlist form if Work is in fact completed. If punchlist work is not found complete, the Contractor shall take action to remedy any insufficiencies and then shall re-submit the written notice and accompanying documentation that Work is ready for **final** inspection and acceptance. If Barton Malow Company and/or Architect are required to perform more than 2 site visits to determine Substantial or Final Completion of Contractor's Work, the costs for such additional inspections shall be charged to Contractor.

The following documents are the minimum required to complete final payment. Contractor shall also submit all additional documentation as required in the Contract Documents:

- a. Final Payment Request (on G702 & G703). – 3 Originals
- b. Guarantees/Warranties (including subs and suppliers).
- c. Final Sworn Statements (including subs and suppliers).
- d. Acknowledgment of Payment and Partial Unconditional Release
- e. Final Release Subcontractor/Materialman
- f. Certified Payroll Report (projects governed by prevailing wage laws)
- g. Verification of Rate Classification and Payment (Federal projects)
- h. Consent of Surety Company to Final Payment (AIA G707)
- i. Consent of Surety to Reduction or Partial Release of Retainage (AIA G707A)
- j. Certificate of Substantial Completion (on G704).
- k. Completion and acceptance of all punchlist Work.

Items b, c, d and e must always be submitted with the final request for payment.

Step 6 REVIEW OF FINAL PAYMENT REQUEST

Barton Malow Company and the Architect will review the Contractor's final payment request and Close-Out file. If all administrative documents are attached or have been submitted (i.e. guarantee, warranty, waiver of lien, etc.), all Work is complete, and all other responsibilities are met, the Project Team will forward the Contractor's Application for Final Payment to the Owner and payment shall be processed according to the Owner's regular procedures.

2.03 FINAL COMPLETION

- A. To attain final completion, the Contractor shall complete activities pertaining to Substantial Completion, and complete Work on punch list items. Only then shall it issue written request to Barton Malow Company to conduct a site visit to determine Final Completion.
- B. When Contractor considers the Work is finally complete, it shall submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Work has been inspected for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents.
 - 4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.
 - 5. Work is completed and ready for final observation.
- C. Barton Malow Company and/or Architect will make an observation to verify the status of completion with reasonable promptness after receipt of such certification.
- D. Should Barton Malow Company and/or Architect consider that the Work is incomplete or defective:
 - 1. Barton Malow Company will promptly notify the Contractor in writing, listing the incomplete or defective Work.
 - 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to the Barton Malow Company that the Work is complete.
 - 3. Barton Malow Company and/or Architect will re-inspect the Work.
- E. When Barton Malow Company and/or Architect determines that the Work is acceptable under the Contract Documents, it shall request the Contractor to make close-out submittals.

2.04 CONTRACTOR'S CLOSE-OUT SUBMITTALS

- A. Evidence of compliance with requirements of governing authorities (state, local or federal):
 - 1. Certificates of Inspection:
 - a. Mechanical
 - b. Electrical
 - c. Others as required
- B. Project Record Documents: Refer to requirements of Section 01720.
- C. Operating and Maintenance Data, Instructions to Owner's Personnel: Refer to requirements of Section 01730.
- D. Warranties and Bonds: Refer to requirements of Individual Sections and Individual Technical Specifications and Section 01740.
- E. Spare Parts and Maintenance Materials: Refer to requirements of Individual Technical Specifications.
- F. Evidence of Payment and Release of Liens: Refer to requirements of General and Supplementary Conditions and Section 01290.

END OF SECTION 01700

SECTION 01720
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 SUMMARY

- A. Each Contractor shall be responsible to maintain at the job site one copy of:
1. Record Contract Drawings
 2. Record Project Manual
 3. Addenda
 4. Reviewed/Approved Shop Drawings
 5. Change Orders
 6. Other modifications to Contract
 7. Field test records
 8. Affidavits
- B. Store documents apart from documents used for construction.
- C. Maintain documents in clean, dry, legible condition.
- D. Do not use project record documents for construction purposes.
- E. Make documents available for inspection by the Owner, Barton Malow Company and the Architect.
- F. Failure to maintain documents up-to-date will be cause for withholding payments to Contractor.
- G. At the outset of the project, obtain from the Architect through the Barton Malow Company, at no charge to the Contractor, one complete set of Contract Documents including:
1. Technical Specifications with all addenda.
 2. One complete set of prints of all Drawings.

1.03 RECORDING

- A. Label each document "Project Record".
- B. Keep record documents current.
- C. Do not permanently conceal any work until required information has been recorded.
- D. Contract Drawings:
1. Contractor may at his option enter required information on a "working set" and then at completion of Project transfer the information to final submitted "Project Record" set.
 2. Contractor shall legibly mark to record actual construction:
 - a. Depths of various elements of foundation in relation to survey data.
 - b. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.

- c. Location and depths of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - d. Field changes of dimension and detail.
 - e. Changes made by PCO- Notice to Proceed.
 - f. Details not on original Contract Drawings.
- E. Technical Specifications and Addenda:
- 1. Contractor shall legibly mark up each section to record:
 - a. Manufacturer, trade name, catalog number and Supplier of each product and item of equipment actually installed.
 - b. Changes made by PCO- Notice to Proceed.
 - c. Other items not originally specified.
- F. Conversion of Schematic Layouts:
- 1. Arrangement of conduits, circuits, piping, ducts and similar items are in most cases shown schematically on the Drawings.
 - 2. Contractor shall legibly mark to record actual construction:
 - a. Dimensions accurate to within 1" of the center of items shown schematically.
 - b. Identify each item, for example, "cast iron drain", "galvanized water", etc.
 - c. Identify location of each item, for example, "under slab", "in ceiling plenum", "exposed", etc.
 - 3. The Owner, Architect or Barton Malow Company may waive requirements of schematic layout conversion, when in their opinion, it serves no beneficial purpose. Do not, however, rely on waivers being issued except as specifically issued by the Barton Malow Company in written form.

1.04 SUBMITTAL

- A. At completion of Project deliver, one original and two copies sets of Record Documents, in a format acceptable to the Owner and the Architect, using the Final Document Submittal Form (in Section 01600 Forms), to Barton Malow Company prior to request for final payment.
- B. Accompany submittal with transmittal letter, in duplicate, containing:
 - 1. Date
 - 2. Project title and number
 - 3. Contractor's name and address
 - 4. Title and number of each record document
 - 5. Certification that each document as submitted is complete and accurate.
 - 6. Signature of Contractor, or his authorized representative.

END OF SECTION 01720

**SECTION 01730
OPERATIONS AND MAINTENANCE DATA**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 SCOPE

- A. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under Contract.
1. Prepare operating and maintenance data as specified in this Section and as referenced in other pertinent sections of the Technical Specifications.
- B. Instruct Owner's personnel in maintenance of products and in operation of equipment and systems in accordance with the requirements in Section 01750 Systems Demonstration, Training and Start-up.

1.03 QUALITY ASSURANCE

- A. Preparation of data shall be done by personnel:
1. Trained and experienced in maintenance and operation of described products.
 2. Familiar with requirements of this Section.
 3. Skilled as technical writer to the extent required to communicate essential data.
 4. Skilled as draftsman competent to prepare required drawings.

1.04 FORM OF SUBMITTALS

- A. Prepare data in the form of an instructional manual for use by Owner's personnel.
- B. Format:
1. Size: 8-1/2" x 11"
 2. Paper: white, for typed pages.
 3. Text: Manufacturer's printed data, or neatly typewritten.
 4. Drawings:
 - a. Provide reinforced punched binder tab, bind in with text.
 - b. Fold larger drawings to size of text pages.
 5. Provide fly-leaf for each separate product, or each piece of operating equipment.
 - a. Provide typed description of product, and major component parts of equipment.
 - b. Provide indexed tabs.
 6. Cover: Identify each volume with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS." list:
 - a. Title of Project
 - b. Identity of separate structures as applicable.
 - c. Identity of general subject matter covered in the manual.
- C. Binders:
1. Commercial quality three-ring binders with durable and cleanable plastic covers.
 2. Maximum ring size: 3"
 3. When multiple binders are used, correlate the data into related consistent groupings.

1.05 CONTENT OF MANUAL

- A. Neatly typewritten table of contents for each volume, arranged in systematic order.
 - 1. Contractor, name of responsible principal, address and telephone number.
 - 2. A list of each product required to be included, indexed to content of the volume.
 - 3. List with each product, name, address and telephone number of:
 - a. Subcontractor or installer.
 - b. Maintenance contractor, as appropriate.
 - c. Identify area of responsibility of each.
 - d. Local source of supply for parts and replacement.
 - 4. Identify each product by product name and other identifying symbols as set forth in Contract Documents.
- B. Product Data:
 - 1. Include only those sheets which are pertinent to the specific product.
 - 2. Annotate each sheet to:
 - a. Clearly identify specific product or part installed.
 - b. Clearly identify data applicable to installation.
 - c. Delete references to inapplicable information.
- C. Drawings:
 - 1. Supplement product data with drawings as necessary to clearly illustrate:
 - a. Relations of component parts or equipment and systems.
 - b. Control and flow diagrams.
 - 2. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation.
 - 3. Contractor may use Project Record Documents as maintenance drawings - coordinate with Barton Malow Company.
- D. Written text, as required to supplement product data for the particular installation:
 - 1. Organize in consistent format under separate headings for different procedures.
 - 2. Provide logical sequence of instructions for each procedure.
- E. Copy of each warranty, bond and service contract issued.
 - 1. Provide information sheet for Owner's personnel, give:
 - a. Proper procedures in event of failure.
 - b. Instances which might affect validity of warranties or bonds.

1.06 MANUAL REVIEW AND PREPARATION SCHEDULE

- A. Submit two copies of preliminary draft of proposed formats and outlines of contents to Barton Malow Company prior to start of preparation.
 - 1. Architect will review draft and return one copy with comments.
- B. Submit TWO (2) copies of completed data in final form to the Barton Malow Company at least 2 months before the end of the project, for Owner review.
 - 1. Copy will be returned after final inspection or acceptance, with comments.

- C. Submit copies of completed operation and maintenance manuals at least two (2) weeks before execution and have at hand for use in demonstrations and instructions.
- D. Submit specified number of copies of approved data in final form to the Barton Malow Company ten (10) days after final inspection or acceptance.

PART 2 - PRODUCTS

2.01 MANUAL FOR MATERIALS AND FINISHES

- A. Submit Three (3) copies of complete manual in final form.
- B. Content, for architectural products, applied materials and finishes:
 - 1. Manufacturer's data, giving full information on products.
 - a. Catalog number, size, and composition.
 - b. Color and texture designations.
 - c. Information required for reordering special-manufactured products.
 - 2. Instructions for care, maintenance and preventative maintenance.
 - a. Manufacturer's recommendation for types of cleaning agents and methods.
 - b. Cautions against cleaning agents and methods which are detrimental to product.
 - c. Recommended schedule for cleaning and maintenance.
- C. Content, for moisture-protection and weather-exposed products:
 - 1. Manufacturer's data, giving full information on products.
 - a. Applicable standards.
 - b. Chemical composition.
 - c. Details of installation.
 - 2. Instructions for inspection, maintenance and repair.
- D. Additional requirements for maintenance data: Reference sections of Technical Specifications.

2.02 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit Three (3) copies of complete manual in final form.
- B. Content, for each unit of equipment and system, as appropriate:
 - 1. Description of unit and component parts.
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 - 2. Operating procedures:
 - a. Start-up, break-in, routine and normal operating instructions.
 - b. Regulation, control, stopping, shutdown and emergency instructions.
 - c. Summer and winter operating instructions.
 - d. Special operating instructions.
 - 3. Maintenance and Preventative Maintenance Procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting".
 - c. Disassembly, repair and re-assemble.
 - d. Alignment, adjusting and checking.
 - 4. Servicing and lubrication schedule.
 - a. List of lubricants required.
 - 5. Manufacturer's printed operating and maintenance instructions.

6. Description of sequence of operation by control manufacturer.
 7. Original manufacturer's parts, list, illustrations, assembly drawings and diagrams required for maintenance.
 - a. Predicted life of parts subject to wear.
 - b. Items recommended to be stocked as spare parts.
 8. As-installed control diagrams by controls manufacturer.
 9. Each Contractor's coordination drawings.
 - a. As-installed color coded piping diagrams.
 10. Charts of valve tag numbers, with location and function of each valve.
 11. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
 12. Other data as required under pertinent sections of specifications.
- C. Content, for each electric and electronic system, as appropriate:
1. Description of system and component parts.
 - a. Function, normal operating characteristics and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 2. Circuit directories of panel boards.
 - a. Electrical service.
 - b. Controls.
 - c. Communications.
 3. As-installed color coded wiring diagrams.
 4. Operating procedures:
 - a. Routine and normal operating instructions.
 - b. Sequences required.
 - c. Special operating instructions.
 5. Maintenance and preventative maintenance procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting".
 - c. Disassembly, repair and re-assemble.
 - d. Adjustment and checking.
 6. Manufacturer's printed operating and maintenance instructions.
 7. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
 8. Other data as required under pertinent sections of specifications.
- D. Prepare and include additional data when the need for such data becomes apparent during instruction of Owner's personnel.
- E. Additional requirements for operating and maintenance data: Reference sections of Technical Specifications.

END OF SECTION 01730

SECTION 01740
WARRANTIES AND GUARANTEES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Attention as directed to Bidding and Contract Requirements, and to Division 1, General requirements, which are hereby made part of this section.

1.02 SUMMARY

- A. This section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers' standard warranties on products and special warranties:
1. Refer to General Conditions for terms of the Contractor's period and obligations for Correction of the Work.
- B. Related Sections: The following sections also contain requirements that relate to this section:
1. Division 1 Section "Contract Close-out" specifies contract close-out procedures.
 2. Divisions 2 through 17 Sections for specific requirements for warranties on products and installations specified to be warranted.
 3. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- C. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.03 DEFINITIONS

- A. **Standard Product Warranties** are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by manufacturer to Owner.
- B. **Special Warranties** are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.04 WARRANTY REQUIREMENTS

- A. Deliver all written warranties and guarantees required by the Contract Documents with the Owner and Barton Malow Company named as beneficiaries. All warranties shall include labor and materials, shall be signed by the manufacturer or subcontractor as the case may be, and countersigned by the Contractor. All written warranties shall be addressed to the Owner and delivered to Barton Malow Company upon completion of the Project, before or with the submission of Request for Final Payment.
- B. In addition to all other warranties set forth in the Contract Documents or imposed by applicable law, Contractor warrants to Owner and Barton Malow Company that the Work will be free from defects and performed in strict conformity with the requirements of the Contract Documents. This warranty survives the termination of the Agreement and shall only be extinguished by limitation periods imposed by applicable law and shall not be limited by any other provisions contained in the Agreement, including any provisions or time periods related to Contractor's obligation to correct defective Work.

- C. Contractor, upon signing the Agreement, shall obtain and forward to Barton Malow Company any and all Standard Product Warranties for products, materials and systems covered under its Agreement. The Manufacturer's warranties do NOT relieve the Contractor from its warranty obligations under the Contract Documents.
- D. Special Warranties shall become effective on a date established by the Project Team. This date generally shall be the date of Final Completion of the Project or Substantial Completion of the Project or portions thereof as agreed upon by the Project Team. In the case of acceptance of a portion of the Work or Project, separate warranties shall be issued for those specific portions of the Project that were accepted, and shall be dated the date the specific portion was accepted. As additional Work is accepted, separate warranties for those specific portions of the Work shall be issued and properly dated. Issuance of warranties for a portion of the Work shall in no way become the basis for Application for Final Payment.
- E. If for any reason, the Bidder cannot warrant any part of the Work using products, materials, or construction methods that have been specified or shown, it shall notify Barton Malow Company in writing at least ten (10) days before the bid submission date, giving reasons together with the names of products and data on substitutions it can guarantee. Should the Bidder fail to so notify Barton Malow Company within this time period, it will be bound to all warranties and guarantees as set forth in the Contract Documents.
- F. Related Damages and Losses: In correcting Work that has been rejected as defective or otherwise failing to conform to the Contract Documents, whether before or after Substantial Completion, Contractor shall bear all related costs, including, but not necessarily limited to, the cost to correct the Work, the cost to correct all other Work that has been damaged by the defective or non-conforming Work, or that is damaged in the process of correcting the defective or nonconforming Work, and the cost of all additional testing and inspections and compensation for the Architect and/or Barton Malow Company's services and expenses made necessary thereby.
- G. Reinstatement of Warranty: When Work covered by a warranty with a specific time period has failed and has been corrected by Contractor, the warranty shall be reinstated for a time period equal to the original warranty.
- H. Express warranties are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available to the Owner or Barton Malow Company under the law. Express warranty periods shall not be interpreted as limitations on the time in which Owner or Barton Malow Company may enforce Contractor's duties and obligation or their rights and remedies under the Agreement and applicable law.
 - 1. Rejection of Warranties: The Owner and Barton Malow Company reserve the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- I. Where the Contract Documents require a Special Warranty, or similar commitment on the Work or part of the Work, the Owner and Barton Malow Company reserve the right to refuse to accept the Work, until the Contractor presents evidence that the entities required to countersign such commitments are willing to do so.

1.05 SUBMITTALS

- A. Submit Three (3) Originals written warranties to the Barton Malow Company within fourteen (14) days of Substantial Completion using the form found in section 01600-Forms and organizing the warranty documents into an orderly sequence based on the table of contents of the Project Manual. If the project Team's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of Barton Malow Company.

- B. When the Contract Documents require Contractor, or Contractor and a Subordinate Party to execute a Special Warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Barton Malow Company for approval prior to final execution.
- C. Forms for warranties are included in Section 01600-Forms. Prepare a written document utilizing the appropriate form, ready for execution by Contractor and its Subordinate Party(ies). Submit a draft to Barton Malow Company for approval prior to final execution.
 - 1. Refer to Divisions 2 through 17 Sections for specific content requirements and particular requirements for submitting Special Warranties.

END OF SECTION 01740

1. Equipment/System Acceptance - This form will be completed for each piece of equipment or system for each contract that requires operational testing and/or training before acceptance. This will document the date of testing, the equipment tested, names of personnel which witnessed the testing and acceptance.
 2. Owner Training Register - This form will be completed for each contract that requires training to be provided to the Owner's personnel. This will document the date of training, type of training, names of the personnel trained and acceptance of the training.
- B. The amount of time required for instruction on each item of equipment and system is that specified in individual sections or as mutually agreed upon between Contractor and Barton Malow Company.
- C. Demonstrate start-up, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment at agreed-upon times, at designated location.
- D. Use operation and maintenance manuals as basis of instruction and review the contents of the manuals with personnel in full detail to explain all aspects of operations and maintenance.
- E. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instructions. **CONTRACTORS ARE TO PROVIDE BARTON MALOW OF 2 CD(SCANNED IN A pdf FORMAT) COPIES AND 3 HARD COPIES OF ALL CLOSEOUT MATERIALS, AS-BUILT DRAWINGS AND OPERATION AND MAINTENANCE MANUALS.**

END OF SECTION 01750