

PROJECT MANUAL

City of Dublin
City Hall
Interior Renovation
Phase 2 & 3

5200 Emerald Parkway
Dublin, OHIO 43017

PREPARED FOR:

CITY OF DUBLIN, OHIO
ADMINISTRATIVE SERVICES – FACILITIES
6555 SHIER RINGS ROAD
DUBLIN, OHIO 43016
614-410-4700

PREPARED BY:

MOODY•NOLAN
RESPONSIVE ARCHITECTURE

300 SPRUCE STREET, SUITE 300
COLUMBUS, OHIO 43215
614-461-4664

March 27, 2013
BID AND CONTRACT DOCUMENTS

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SECTION 1
BIDDING REQUIREMENTS

INVITATION TO BID

Sealed proposals will be received from qualified bidders by:

**City of Dublin, Ohio
Administrative Services – Facilities
6555 Shier Rings Road
Dublin, Ohio 43016**

until **2:00 p.m.** local time on **Monday, April 15, 2013** at which time the sealed proposals will be opened by the **Facilities Manager**, for the following project:

Dublin City Hall Interior Renovation Phase 2 & 3

For all labor, materials and equipment necessary for the construction and associated site work for the Dublin City Hall Interior Renovation Phase 2 & 3 as indicated within the plans and associated documents and as instructed by the Facilities Manager at the pre-bid meeting to be held Friday, April 5, 2013 at 10:00 a.m. at the Dublin City Hall 5200 Emerald Parkway in Dublin, Ohio 43016.

All work is to be included in the bid.

Service delivery shall be in accordance with contract documents.

Bidders shall submit with their proposals a certified check, cashier's check, letter of credit, or a satisfactory bid bond in an amount equal to five percent (5%) of the estimated value of the contract.

Contract Documents

The contract documents will be available for examination during regular business hours until the date of bid opening at:

**City of Dublin, Ohio
Administrative Services – Facilities
6555 Shier Rings Road
Dublin, Ohio 43016**

And

**F.W. Dodge
1175 Dublin Road
Columbus, Ohio 43215**

Copies of the contract documents may be obtained upon request accompanied by a non-refundable deposit in the amount of **\$30.00** for each set of contract documents. Checks shall be made payable to "City of Dublin, Ohio." The contract documents may be obtained from:

City of Dublin, Ohio
Administrative Services - Facilities
6555 Shier Rings Road
Dublin, Ohio 43016

The Architect's estimate of cost for the project is \$106,123.

Prevailing Wages

APPLICABLE

Bidders shall comply with Chapter 4115 of the Ohio Revised Code (Wages and Hours on Public Works). Bidders are responsible for verifying that the most current wage rates are utilized in their bids. The successful bidder is also responsible for any changes in the prevailing wage rates or classifications throughout its performance of work on the Project.

Bids and Attached Documents

Bidders shall submit their bids on the form of proposal provided by the **Facilities Manager**.

Each proposal shall be submitted in its entirety in a sealed envelope addressed to:

**Brian Ashford
Facilities Manager
City of Dublin, Ohio
Administrative Services - Facilities
6555 Shier Rings Road
Dublin, Ohio 43016**

Each sealed envelope containing a proposal shall be plainly marked on the outside as – “Bid for: **Dublin City Hall Interior Renovation Phase 2 & 3.**” The envelope shall bear the name and address of the bidder.

If forwarded by mail, the sealed envelope containing the proposal must be enclosed in another envelope and the outside of the envelope must be addressed to and marked:

**Brian Ashford
Facilities Manager
City of Dublin, Ohio
Administrative Services - Facilities
6555 Shier Rings Road
Dublin, Ohio 43016**

BID FOR: Dublin City Hall Interior Renovation Phase 2 & 3

Bidders shall submit the following with their proposals:

1. Non-collusion Affidavit.
2. Bid Guaranty.
3. List of Subcontractors if applicable.
4. Delinquent Personal Property Tax Affidavit.
5. Affidavit of Authority (if Bidder is a corporation).
7. Experience Record/References.
8. Power of Attorney (if Bidder is an out-of-state corporation).

The City of Dublin, Ohio reserves the right to reject any and all proposals and to waive any informalities or irregularities in the proposals.

Bidders may address inquiries to:

**Brian Ashford
Facilities Manager
City of Dublin, Ohio
Administrative Services - Facilities
6555 Shier Rings Road
Dublin, Ohio 43016
Telephone: (614) 410-4700
Fax: (614)761-6512
The hearing impaired may
call V/TDD at (614) 410-4700**

By order of the City Council of the City of Dublin, Ohio.
CITY OF DUBLIN, OHIO
Marsha I. Grigsby
City Manager

INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

Immediately notify **Moody Nolan** upon finding discrepancies or omissions in the bidding documents.

Direct inquiries and questions to:

Moody Nolan
300 Spruce Street, Suite 300
Columbus, Ohio 43215
Phone 614-461-4664
Fax 614-280-8881

1. Submit written request for clarification, correction or interpretation to the City not less than 7 days before the date for receipt of bids.
2. Modifications to the bidding documents will be issued as Addenda to the specifications and will become a part of the Contract.
3. No bidder shall rely on oral modifications or any other method of clarification, correction or interpretation of the bidding documents. Only modifications set forth in an Addendum will be binding.

PREVAILING WAGE DISKETTE

SECTION 2
BIDDING FORMS

PROPOSAL

**Dublin City Hall Interior Renovation
Phase 2 & 3**

_____ (the "Bidder") submits this Proposal having read and examined the contract documents, including but not limited to the Invitation to Bid; the City of Dublin, Ohio

All bids will be based upon elements indicated within the Drawings and Specifications. All changes to actual length, either additions or subtractions, will be through Change Order(s) using unit price(s) provided by contractor on proposal form.

<u>Addenda Number</u>	<u>Date of Receipt</u>
_____	_____
_____	_____
_____	_____

The Bidder proposes to provide the above named **Dublin City Hall Interior Renovation Phase 2 & 3** in accordance with the contract documents for the following sum:

Total Bid (in figures): \$ _____
Total Bid (in words): \$ _____

Alternate No. 1 – Sliding Panel at Window Infill: If Alternate No. 1 is accepted, ADD TO the Total Bid the following:

Total Alternate No. 1 Bid (in figures): \$ _____
Total Alternate No. 1 Bid (in words): \$ _____

In the event of a discrepancy between the amount of the total bid as written in figures and in words, the amount written in words shall govern.

Unless otherwise specified in the Bid Document the amount of the total bid is based on the unit prices or lump sum set forth in the Bid Schedule attached hereto and incorporated herein. The Bidder understands and agrees that delivery under the Agreement for **Dublin City Hall Interior Renovation Phase 2 & 3 project** shall be complete within the following dates, unless an extension of time is granted by the **Facilities Manager**.

Phase 2

Start Date: Tue 8/13/2013

Completion Date: Fri 9/6/2013

Phase 3

Start Date: Mon 8/26/2013

Completion Date: Mon 9/23/2013

Upon failure to have all work completed within the project time, the City of Dublin, Ohio shall be entitled to retain or recover from the Bidder, as liquidated damages, and not as a penalty, the amounts set forth in the following table for each and every calendar day until completion. The right of the City of Dublin, Ohio to recover liquidated damages shall not substitute for any recovery for additional costs in the event the Bidder fails to complete the Agreement for construction according to the contract documents.

Liquidated Damages:

<u>Contract Amount</u>	<u>Dollars Per Day</u>
\$0-25,000	\$ 100.00
25,001-50,000	150.00
50,001-100,000	200.00
100,001-500,000	300.00
500,001-1,000,000	500.00
1,000,001-2,000,000	750.00
2,000,001-5,000,000	1,000.00
5,000,001-10,000,000	1,500.00
Over \$10,000,001	2,000.00

REPRESENTATIONS OF THE BIDDER

The Bidder represents the following:

1. The Bidder has read and understands the contract documents and understands that it must comply with all requirements of the contract documents, regardless of whether the Bidder has actual knowledge of the requirements and regardless of any statement or omission made by the Bidder which might indicate a contrary intention.
2. The Proposal is based upon the items specified by the contract documents.

3. The Bidder has visited the site, become familiar with local conditions, and has correlated personal observations about the requirements of the contract documents. The Bidder has no outstanding questions regarding the interpretation of the contract documents.
4. The Bidder has submitted the following in connection with this Proposal and the information contained therein is complete and accurate:
 - a. Non-collusion Affidavit.
 - b. Bid Guaranty.
 - c. List of Subcontractors.
 - d. Delinquent Personal Property Tax Affidavit.
 - e. Affidavit of Authority (if Bidder is a corporation).
 - g. Experience Record/References.
 - h. Power of Attorney (if Bidder is an out-of-state corporation).

6. The Bidder understands that the Agreement for the **Dublin City Hall Interior Renovation Phase 2 & 3** is subject to all of the provisions, duties, obligations, remedies and penalties of Ohio Revised Code Chapter.

7. Within ten (10) business days from the date of receipt the Notice of Intent to Award, the Bidder understands that it must enter into and execute an Agreement for **Dublin City Hall Interior Renovation Phase 2 & 3** with the City of Dublin, Ohio if awarded on the basis of this Proposal. If the Bidder does not execute an Agreement for **Dublin City Hall Interior Renovation Phase 2 & 3** for any reason, the Bidder and the Bidder's surety shall be liable to the City of Dublin, Ohio as provided in Ohio Revised Code Section 153.54(G).

8. Within ten (10) business days of the date of receipt of the Notice of Intent to Award, the Bidder understands that it must submit the following:
 - a. Performance Bond.
 - b. Certificate of Insurance and a copy of Additional Insured Endorsement.
 - c. Certificate of Compliance with Affirmative Action.
9. The Bidder understands that it must furnish any other information requested by the **Brian Ashford, Facilities Manager**.

The Bidder hereby signs this Proposal on the ___ day of _____, 2013.

If Bidder is an individual, complete the following:

Signature: _____

Print Name: _____

Name of Business: _____
(if different than above)

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

If Bidder is a partnership, complete the following:

Name of Partnership: _____

By: _____
(Signature)

Print Name: _____

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

Names and Addresses of all general partners:

If Bidder is a joint venture, complete the following:

Name of Joint Venture: _____

By: _____
(Signature)

Print Name: _____

Address: _____

Telephone: () _____

Fax: () _____

Complete the following for each firm represented by the joint venture:

1. Name: _____

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

2. Name: _____

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

If Bidder is a corporation, complete the following:

Name of Corporation: _____

By: _____
(Signature)

Print Name: _____

Title: _____

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

State of Incorporation: _____

Names and addresses of Corporate Officers:

If Bidder is an entity other than those described above, complete the following:

Name of Bidder:

By: _____
(Signature)

Print Name: _____

Title: _____

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

Type of Business Entity: _____

Names and addresses of all Principals:

BID BOND

Dublin City Hall Interior Renovation Phase 2 & 3

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned (the "Principal") and (the "Surety") are hereby held and firmly bound unto the City of Dublin, Ohio ("Dublin") as obligee in the penal sum of the dollar amount of the bid submitted by the Principal to Dublin on, _____, **2013** to undertake the project known as:

Dublin City Hall Interior Renovation Phase 2 & 3

The penal sum referred to herein shall be the dollar amount of the Principal's bid to Dublin, incorporating any additive or deductive alternate proposals made by the Principal on the date referred to above to Dublin, which are accepted by Dublin. In no case shall the penal sum exceed the amount of _____ dollars (\$ _____). (If the foregoing blank is not filled in, the penal sum will be the full amount of the Principal's bid, including alternates. Alternatively, if the blank is filled in, the amount stated must not be less than the full amount of the bid including alternates, in dollars and cents. A percentage is not acceptable.)

For the payment of the penal sum well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above-named Principal has submitted a bid for **Dublin City Hall Interior Renovation Phase 2 & 3**

NOW, THEREFORE, if Dublin accepts the bid of the Principal and the Principal fails to enter into a proper contract in accordance with the bid, plans, details, specifications, and bills of material; and in the event the Principal pays to Dublin the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid and such larger amount for which Dublin may in good faith contract with the next lowest bidder to perform the work covered by the bid, or in the event Dublin does not award the contract to the next lowest bidder and resubmits the project for bidding, the Principal will pay Dublin the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid, or the costs, in connection with the resubmission, of printing new contract documents, required advertising and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect; if Dublin accepts the bid of the Principal and the Principal within ten days after the awarding of the contract, enters into a proper contract in accordance with the bid, plans, details specifications, and bills of material, which said contract is made a part of this bond the same as though set forth herein.

NOW ALSO, if the Principal shall well and faithfully do and perform the things agreed by Principal to be done and performed according to the terms of said contract; and shall pay all lawful claims of subcontractors, material men, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract; we agreeing and assenting that this undertaking shall be for the benefit of any material man or laborer having a just claim, as well as for Dublin herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The Surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of said contract or in or to the plans or specifications therefore shall in any wise affect the obligations of the Surety on the Surety's bond, and the Surety does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the plans or specifications.

Signed this _____ day of _____, **2013.**

PRINCIPAL:

By: _____
(Signature)

Print Name: _____

Title: _____

Address:

Telephone: () _____

SURETY:

By: _____
(Signature)

Print Name: _____

Title: _____

Address:

Telephone: () _____

SURETY AGENT:

By: _____
(Signature)

Print Name: _____

Title: _____

Address:

Telephone: () _____

DELINQUENT PERSONAL PROPERTY TAX AFFIDAVIT

Dublin City Hall Interior Renovation Phase 2 & 3

STATE OF _____
COUNTY OF _____, SS:

I, _____ (Affiant),
_____ (Title) of _____ (the "Bidder"),
after being cautioned and sworn, represent to the City of Dublin, Ohio, the following: (check the
appropriate statement)

At the time the Proposal was submitted, the Bidder was not charged with delinquent personal property taxes on the General Tax Lists of Personal Property of a county in which the City of Dublin, Ohio has territory (Franklin, Delaware, and Union Counties).

OR

At the time the Proposal was submitted, the Bidder was charged with delinquent personal property taxes on the General Tax Lists of Personal Property of a county in which the City of Dublin, Ohio has territory (Franklin, Delaware, and Union Counties) and that the amounts of such due and unpaid delinquent taxes, including due and unpaid penalties and interest, are set forth below:

<u>Taxes:</u>	<u>Penalties and Interest:</u>	<u>Counties:</u>
\$ _____	\$ _____	_____
\$ _____	\$ _____	_____
\$ _____	\$ _____	_____

(Signature of Affiant)

(Print Name)

Sworn to and subscribed before me this ____ day of _____ 2013.

Notary Public

NONCOLLUSION AFFIDAVIT

Dublin City Hall Interior Renovation Phase 2 & 3

STATE OF _____
COUNTY OF _____, SS:

I, _____ (Affiant),
_____ (Title) of _____ (the
"Bidder"), after being cautioned and sworn, represent to the City of Dublin, Ohio the following:

1. The bid price contained in the Bidder's Proposal for the Project has been arrived at independently without collusion, consultation, communication, or agreement for the purpose of restricting competition as to any matter relating to such bid price with any other bidder or third party.
2. Unless otherwise required by law, neither the bid price nor the Proposal has been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to the bid opening, directly or indirectly, to any other bidder or to any third party that would have any interest in the bid price.
3. No attempt has been made or will be made by the Bidder to induce any other individual, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition.

(Signature of Affiant)

(Print Name)

Sworn to and subscribed before me this ___ day of _____, 2013

Notary Public

AFFIDAVIT OF AUTHORITY

Dublin City Hall Interior Renovation Phase 2 & 3

STATE OF _____
COUNTY OF _____, SS:

I, _____ (Affiant), after being cautioned and sworn, state the following:

1. I am the Secretary of _____ (the "Company"), a corporation organized and existing under the laws of the State of _____.
2. I am familiar with the records of the Company.
3. _____ (name of officer) is authorized to sign the Proposal and to execute a contract on behalf of the Company for the above-referenced project.

(Signature of Affiant)

(Print Name)

Sworn to and subscribed before me this _____ day of _____, **2013**

Notary Public

LIST OF SUBCONTRACTORS
Applicable X

Dublin City Hall Interior Renovation Phase 2 & 3

NOTE: The bidder must perform at least **50%** of the total contract cost with its own forces.

Complete the following information for all subcontractors, which will be employed on the Project.

1. Name of Subcontractor: _____

Federal Identification Number: _____

Address: _____

Type of Work Subcontractor to
Provide: _____

Approximate Percentage of the Contract Cost to be Performed by Subcontractor: _____

Experience Record: _____

2. Name of Subcontractor: _____

Federal Identification Number: _____

Address: _____

Type of Work Subcontractor to Provide: _____

Approximate Percentage of the Contract Cost to be performed by Subcontractor:

Experience Record: _____

3. Name of Subcontractor: _____

Federal Identification Number: _____

Address: _____

Type of Work Subcontractor to Provide:

Approximate Percentage of the Contract

Cost to be performed by Subcontractor: _____

Experience Record: _____

4. Name of Subcontractor: _____

Federal Identification Number: _____

Address: _____

Type of Work Subcontractor to Provide:

Approximate Percentage of the Contract

Cost to be performed by Subcontractor: _____

Experience Record: _____

5. Name of Subcontractor: _____

Federal Identification Number: _____

Address: _____

Type of Work Subcontractor to Provide:

Approximate Percentage of the Contract

Cost to be performed by Subcontractor: _____

Experience Record: _____

EXPERIENCE RECORD/REFERENCES

Dublin City Hall Interior Renovation Phase 2 & 3

NOTE: Bids from contractors inexperienced in this particular type of work will not be considered.

Complete the following information with respect to previous purchasers.

1. Name of Person to Contact for Reference:

Address: _____

Phone: () _____

2. Name of Person to Contact for Reference:

Address: _____

Phone: () _____

3. Name of Person to Contact for Reference:

Address: _____

Phone: () _____

SECTION 3
CONTRACT FORMS
(TO BE EXECUTED WITH THE SELECTED BIDDER)

NOTICE OF INTENT TO AWARD

**Dublin City Hall Interior Renovation Phase 2 & 3
5200 Emerald Parkway
Dublin, Ohio 43017**

To: _____

You are hereby notified that the City of Dublin, Ohio has accepted the Proposal submitted by you on _____, **2013** in response to the Invitation to Bid for the above-referenced project.

Within ten (10) business days from the date of receipt of this Notice of Award, you are required to:

1. Execute an Agreement for Construction.
2. Submit a Performance Bond.
3. Submit a Certificate of Insurance and a copy of an Additional Insured Endorsement.
4. Submit an Affirmative Action Certificate of Compliance.

If you fail to execute the Agreement for construction or provide the required submittals within ten (10) business days from the date of receipt of this Notice of Intent to Award, you or your surety shall be liable to the City of Dublin, Ohio as provided in Ohio Revised Code Section 153.54(G) and the City of Dublin, Ohio may award the contract to the next lowest and best bidder.

You are required to prepare and submit a progress schedule prior to the pre-construction conference to be held on _____ Not Applicable _____

Return an acknowledged copy of this Notice of Intent to Award to:

**Brian Ashford, Facilities Manager
Facilities Department
6555 Shier Rings Road
Dublin, Ohio 43016**

CITY OF DUBLIN, OHIO

Date: _____

By: _____

Brian Ashford, Facilities Manager

RECEIPT OF NOTICE OF INTENT TO AWARD

Receipt of this Notice of Intent to Award is hereby acknowledged this _____ day
of _____, **2013**.

Company Name: _____

Signature: _____

Print Name: _____

Title: _____

Contract No: _____

**STANDARD AGREEMENT
CITY OF DUBLIN, OHIO**

This Agreement is entered into this ____ day of _____, 20____, by and between the City of Dublin, Ohio (**DUBLIN**), the Owner, located at 5200 Emerald Parkway, Dublin, Ohio 43017, and the

SERVICE PROVIDER

For services in connection with:

The labor, materials, and equipment required for the construction of new little league ball fields and associated site work including fencing, hardscape, landscaping, and electrical improvements.

FOR THE FOLLOWING:

**Dublin City Hall Interior Renovation Phase 2 & 3
5200 Emerald Parkway, Dublin**

The **ARCHITECT** of the Project is

**Moody Nolan
300 Spruce Street, Suite 300
Columbus, Ohio 43215**

THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES. CONSULTATION WITH AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS EXECUTION, COMPLETION AND MODIFICATION.

CONTRACT DOCUMENTS

This Agreement is for performance of a portion of the Work for the Project identified above. All Work by Service Provider shall be performed in accordance with the Contract Documents. The Contract Documents comprise of and include this Agreement, General and Supplemental Conditions, Plans and Specifications, Project Manuals and all amendments thereto. These Contract Documents are hereby specifically incorporated herein as part of this Agreement and shall govern the Service Provider for his portion of the Work related to the Project.

Service Provider shall furnish all materials, supplies, equipment, and other items proper or necessary to perform and complete the Work, including specifically providing all supervision and labor required for the completion of the Work in accordance with the Contract Documents.

Service Provider agrees and acknowledges that it has evaluated and is satisfied with the conditions and limitations under which the Work is to be performed, including, without limitation (i) the location, condition, layout and nature of the Project site and surrounding areas; (ii) generally prevailing weather and climatic conditions; (iii) anticipated labor supply and costs; (iv) availability and cost of materials, tools and equipment; and (v) other similar issues. Service Provider further represents and warrants that it is familiar with the entire Scope of its Work and that the Contract Price includes all of its Work that is specifically included in the Contract Documents or which is reasonably inferable from the Contract Documents.

In the event of inconsistencies within or between parts of the Contract Documents, or between the Contract Documents and applicable standards, codes, and ordinances, Service Provider shall (i) provide the better quality or greater quantity of Work or (ii) comply with the more stringent requirement.

CONTRACT PRICE

As full compensation for performance of the Agreement, Dublin agrees to pay Service Provider in current funds the Contract Price for the satisfactory performance of the Work, in the manner described below, subject to all applicable provisions of the Agreement (check appropriate box):

the firm fixed price of _____ Dollars (\$_____) subject to additions and deductions as provided for in the Contract Documents; and/or

unit prices in accordance with the attached Schedule of Unit Prices and estimated quantities, which is incorporated herein by reference and identified as Schedule; and/or

time and material rates and prices in accordance with the attached Schedule of Labor and Material Costs which is incorporated herein by reference and identified as Schedule

The firm fixed-price, unit prices and/or time and material rates and prices are hereinafter referred to as the "Contract Price."

**SURETY BONDING
BONDS**

Service Provider shall, if required, furnish to Dublin appropriate surety bonds to secure performance of the Work and to satisfy all Service Provider's payment obligations under the Agreement. The surety bond shall provide that the terms of the Agreement and Contract Documents are incorporated by reference therein. Any bond provided by Service Provider pursuant to this provision is hereby deemed to so incorporate the Contract Documents and it is understood that the surety is accepting each and every responsibility and obligation which Service Provider has assumed toward Dublin under this Agreement and the Contract Documents, including but not limited to liability for indemnity, attorneys' fees and delay damages.

Bond: Required Not Required

If a performance or payment bond, or both, are required of the Service Provider under this Agreement, then said bonds shall be in the full amount of the Contract Price, unless otherwise specified herein.

The cost of the bond, if required, is included in the Contract Price.

In the event Service Provider shall fail to provide the required bonds within seven days after date of signature of this Agreement by both Parties, Dublin after giving the Service Provider written notice and opportunity to cure this may terminate this Agreement and enter into a contract for the balance of the Work with another contractor. The Service Provider shall pay all Dublin's costs and expenses incurred by Dublin as a result of said termination.

**PERFORMANCE OF WORK
TIME IS OF THE ESSENCE**

It is expressly understood and agreed by and between the Parties that time is of the essence regarding completion of the Work by Service Provider. Service Provider shall undertake all activities necessary for the performance of its Work immediately upon receipt of a letter of intent or notification of the award of this Agreement and shall commence work hereunder so that the entire Project may be completed in accordance with the Project Schedule. Service Provider shall perform, coordinate and schedule its Work so as not to cause any delay or disruption to the Project Schedule, the work of other entities on this Project or the completion date of the Project.

Service Provider acknowledges and agrees that Dublin will incur additional costs, damages, liabilities, lost profits or losses related to loss of use if this Project is not completed in accordance with any milestone or interim dates/deadlines or the substantial or final completion dates on the Project Schedule. As a result, Service Provider shall be liable for and shall reimburse Dublin for any such additional costs, damages, liabilities, lost profits or losses related to loss of use for its failure to meet all milestone, interim, substantial or final completion dates in accordance with the Project Schedule.

RELATIONSHIP OF THE PARTIES

Service Provider accepts the relationship of trust and confidence established by this Agreement to exercise its skill and judgment to further Dublin's interests, and to perform the Work in an expeditious and economical manner consistent with Dublin's interests. Nothing in this Agreement shall be construed to constitute the relationship between Service Provider and Dublin as a partnership, association, or joint venture.

Service Provider shall perform its Work under the general direction of Dublin (and/or Dublin's representative, construction manager, architect, or other duly authorized individual/entity) and in accordance with this Agreement and as reasonably inferable from the Contract Documents as being necessary to produce the intended results as specified hereafter.

PROJECT SCHEDULE

Service Provider agrees to perform its work in accordance with the sequence and schedule for this Project, and with any updates thereto (referred to in this Agreement as the "Project Schedule"). By agreeing to perform its Work in accordance with the Project Schedule, Service Provider has included reasonable allowances for out of sequence work, and weather and unusual or unforeseen delays. If requested by Dublin, Service Provider shall participate and cooperate in the development of the Project Schedule and any revisions thereto.

Service Provider shall continuously monitor the Project Schedule so as to be fully familiar with the timing, phasing and sequence of operations of Service Provider's Work and the other work being performed on the Project. Service Provider shall coordinate its Work with all other work on the Project to avoid conflict or interference with such other work.

If Dublin determines that Service Provider's Work has failed to meet the Project Schedule or any update thereof, Service Provider shall within seventy-two (72) hours of its receipt of written notice from Dublin prepare and submit a recovery schedule relating to its activities. Service Provider agrees that it shall at its sole cost and expense take such measures as are necessary, including adding manpower and/or equipment and/or working overtime to accelerate its activities to conform to the Project Schedule or any update thereto. Should Service Provider fail to undertake such measures Dublin shall have the right to supplement Service Provider's forces and/or equipment and back-charge Service Provider for the costs so incurred, together with a markup of ten percent (10%) for overhead and profit.

PERFORMANCE

Service Provider shall use its best care, skill, and diligence in supervising, directing and performing, the Work. Service Provider shall have sole responsibility for the performance of the Work, including the methods, techniques and means for completing all portions of the Work. Service Provider has the responsibility to ensure that all material suppliers and subcontractors adhere to the Contract Documents, and that they order materials in time, taking into account the current market regarding both pricing and delivery conditions.

EXTRAORDINARY MEASURES BY DUBLIN

If the performance of the Work, as of a milestone or interim date/deadline on the Project Schedule, has not progressed or reached the level of completion required by the Contract Documents, Dublin shall have the right to order Service Provider to take corrective measures necessary to expedite the progress of the Work, including, without limitation, (i) working additional shifts or overtime, (ii) supplying additional manpower, equipment, and facilities, and (iii) other similar measures (hereinafter referred to collectively as "Extraordinary Measures"). Such Extraordinary measures shall continue until the progress of the Work complies with the stage of completion required by the Contract Documents. Dublin's right to require Extraordinary Measures is solely for the purpose of ensuring the Contractor's compliance with the Project Schedule. Service Provider shall not be entitled to an adjustment in the Contract Price in connection with Extraordinary Measures required by Dublin.

INTERPRETATION OF AGREEMENT INCONSISTENCIES AND OMISSIONS

Should inconsistencies or omissions appear in the Contract Documents, it shall be the duty of Service Provider to so notify Dublin in writing within three (3) working days of Service Provider's discovery thereof. Upon receipt of said notice, Dublin shall instruct the Service Provider as to the measures to be taken and Service Provider shall comply with Dublin's instructions. If Service Provider performs work knowing it to be contrary to any applicable laws, statues, ordinances, building codes, rules or regulations without notice to Dublin and advance approval by appropriate authorities, then Service Provider shall assume full responsibility for such work and shall bear all associated costs, charges, fees and expenses necessarily incurred to remedy the situation.

LAW AND EFFECT

The performance of this Agreement and all of its terms and conditions shall be interpreted and governed by the laws of the State of Ohio, unless otherwise noted herein.

SEVERABILITY

The partial or complete invalidity of anyone or more provisions of this Agreement shall not affect the validity or continuing force and effect of any other provision.

ENTIRE AGREEMENT

This Agreement is solely for the benefit of the signatories hereto and represents the entire and integrated agreement between the Parties hereto and, unless specifically referenced herein, supersedes any prior negotiations, representations, or agreements, either written or oral.

DUBLIN'S OBLIGATIONS

FINANCING INFORMATION Upon written request from Service Provider, Dublin agrees to furnish reasonable evidence that financial arrangements have been made or otherwise exist to fulfill Dublin's payment obligations under the Agreement.

PROJECT FEES Except for permits and fees, which are the responsibility of Service Provider, Dublin agrees to secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

TIMELY COMMUNICATIONS Dublin, with reasonable promptness, shall transmit all submittals, transmittals, and written approvals relating to the Work. Any other information or services relevant to service Provider's performance of the Work under Dublin's control shall be furnished by Dublin after receipt from Service Provider of a written request for such information or services.

SERVICE PROVIDER'S OBLIGATIONS

RESPONSIBILITIES Service Provider shall furnish all of the labor, materials, equipment, and services, including, but not limited to, competent supervision, shop drawings, samples, tools, and equipment as may be necessary for the proper performance of the Work in accordance with and as reasonably inferable from the Contract Documents.

SUBCONTRACTING Service Provider shall provide to Dublin written notice that it intends to subcontract any of the Work covered by the scope of the Contract Documents to a third party. Dublin shall have the right to approve any and all such subcontracts and Service Provider shall not allow any work to be performed by any subcontractor that has not been approved in writing by Dublin. Service Provider agrees that it shall not be entitled to any additional compensation in the event that Dublin does not approve a proposed subcontractor. Service Provider further agrees to incorporate the terms and conditions of this Agreement into every subcontract.

In the event that Service Provider has work performed by a subcontractor who has not been approved by Dublin, Dublin shall have the right to terminate this Agreement or supplement Service Provider's Work as necessary to have the same completed in accordance with the Contract Documents. Any and all costs incurred by Dublin as a result of such action shall be the responsibility of Service Provider and Dublin may back-charge Service Provider therefore.

SHOP DRAWINGS SAMPLES, PRODUCT DATA AND MANUFACTURERS' LITERATURE

To the extent applicable or required, Service Provider shall promptly submit to Dublin for approval all shop drawings, samples, product data, manufacturers' literature and similar submittals as required by the Contract Documents or as required herein. Service Provider shall prepare and deliver its submittals to Dublin in such time and sequence so as not to delay the Project. The approval of any Service Provider submittal shall not be deemed to authorize deviations, substitutions or changes in the requirements of the Contract Documents unless express written approval is obtained from Dublin authorizing such deviation, substitution or change.

COORDINATION AND COOPERATION

Service Provider shall:

- (a) cooperate with Dublin and all others whose work may interfere or interface with the Work;
- (b) before proceeding with the Work under this Agreement, accurately check all previous and surrounding work done by other entities, determine its correctness, specifically note and immediately advise Dublin of any interference or discrepancies with the Work. Failure of Service Provider to detect and report discrepancies shall relieve Dublin of any and all Service Provider claims to recover cost, expense or damage resulting there from; and
- (c) participate in the preparation of coordination drawings and work schedules involving the Work, to the extent required or requested by Dublin.

AUTHORIZED REPRESENTATIVE

Unless otherwise stated in writing by Dublin, Service Provider shall have a competent foreman, superintendent, or representative, satisfactory to Dublin, on the Project at all times with authority to act on behalf of Service Provider with respect to the work and for the purpose of receiving notices, orders and instructions. Service Provider shall identify the person or persons so authorized to act on its behalf, in writing, before commencing work on the Project. All decisions, agreements or representations made by Service Provider's designated representative for this Project, whether oral or written, shall be binding on Service Provider.

TESTS AND INSPECTIONS

Service Provider shall schedule all required tests, approvals and inspections of the Work or portions thereof at appropriate times so as not to delay the progress of the Work or the Project. Service Provider shall bear all expenses associated with tests, inspections and approvals required of the Service Provider by the Contract Documents, unless otherwise agreed to.

WORKMANSHIP

Every part of the Work shall be executed in accordance with the Contract Documents in a workmanlike and professional manner. All materials used in the Work shall be furnished in sufficient quantities to facilitate the proper and expeditious execution of the Work, and shall be new.

MATERIALS FURNISHED BY OTHERS

In the event the scope of the Work includes installation of materials or equipment furnished by others, it shall be the responsibility of Service Provider to examine those items, store and install the items, unless otherwise provided for in the Contract Documents, with such skill and care as to ensure a satisfactory and proper installation. Loss or damage due to acts of Service Provider shall be deducted from any amounts due or to become due Service Provider under this Agreement.

SUBSTITUTIONS

No substitutions shall be made in the Work unless permitted in the Contract Documents and then only upon the Service Provider first receiving all approvals required under the Contract Documents for substitutions.

WARRANTY

Service Provider warrants and guarantees that its Work conforms in all respects to the Contract Documents and that it is free from defects in material and/or workmanship. Service Provider hereby warrants and guarantees its work to be free of defects in material or workmanship for a period of one year from the date of substantial completion, or such longer period as may be required by the Contract Documents or provided by any manufacturer's warranty applicable thereto. Service Provider further agrees to furnish any special warranties required by the Contract Documents relating to its Work prior to and as a condition of final payment. Service Provider agrees to perform any remedial or corrective work necessary to satisfy its warranty obligations without cost to Dublin.

UNCOVERING/CORRECTION OF WORK

If directed in writing by Dublin, Service Provider must uncover any portion of the Work, which has been covered by the Service Provider in violation of the Contract Documents or contrary to a directive issued by Dublin. Upon receipt of a written directive from Dublin, Service Provider shall uncover such Work for Dublin's inspection and then

restore the uncovered Work to its original condition at the Service Provider's time and expense.

Dublin may direct Service Provider to uncover portions of the Work for inspection by Dublin at any time. Service Provider is required to uncover such Work whether or not Dublin had requested to inspect the Work prior to it being covered. This Agreement shall be adjusted by Change Order for the cost and time of uncovering and restoring any Work which is uncovered for inspection and proves to be installed in accordance with the Contract Documents, provided Dublin had not previously instructed the Service Provider to leave the Work uncovered. If Service Provider uncovers Work pursuant to a directive issued by Dublin, and such Work upon inspection does not comply with the Contract Documents, then Service Provider shall be responsible for all costs and time of uncovering, correcting and restoring the Work so as to make it conform to the Contract Documents.

Service Provider is required to correct in a timely fashion any Work rejected by Dublin for failing to comply with the Contract Documents whether observed prior to the commencement of the warranty period(s) or during the warranty period(s). Service Provider shall correct at its own cost and time and bear the expense of additional services for any nonconforming Work for which it is responsible.

CLEANUP

Service Provider shall at all times: (a) keep the Project and premises free from all rubbish and debris resulting from the Work; (b) broom clean each of its work areas prior to discontinuing work each day; and (c) clean up to the satisfaction of Dublin, including, but not limited to, dirt, grease, machine marks, etc., from walks, ceilings, floors, fixtures, etc. deposited or placed by or resulting from its Work.

If Service Provider fails to immediately commence compliance with cleanup duties within twenty-four (24) hours after written notification from Dublin of non-compliance, Dublin may implement appropriate cleanup measures without further notice and deduct the cost thereof from any amounts due or to become due to Service Provider under this Agreement.

SAFETY OF PERSONS AND PROPERTY

Service Provider is responsible for the health and safety of its employees, agents, subcontractors, and other persons on and adjacent to the Project site. Service Provider, however, shall take all necessary and prudent safety precautions with respect to its Work and shall comply with all safety programs and measures, and with all applicable laws, ordinances, rules, regulations and orders of any public authority for the safety of persons or property, including, but not limited to, OSHA. Service Provider shall also coordinate work activities with Dublin, other contractors or entities, or any other parties involved with this Project to reduce the risk of an accident or injury occurring.

Service Provider shall protect any of its work and materials susceptible to damage from moisture or hosting of mold at all times. Service Provider agrees to indemnify, hold harmless and defend Dublin from any and all claims, losses, costs and expenses (including, but not limited to, all attorneys' and consultants' fees) relating to or arising from mold resulting from Service Provider's Work.

INSURANCE

SERVICE PROVIDER'S INSURANCE

Prior to start of the Work, Service Provider shall procure and maintain in full force and effect Workers' Compensation Insurance, Employer's Liability Insurance, Comprehensive or Commercial General Liability Insurance on an occurrence basis, and any additional insurance required of Service Provider. Service Provider shall deliver all certificates of insurance to Dublin, or upon request, copies of the actual insurance policies. All liability insurance policies described above shall be written on a comprehensive form and shall conform to the laws of the State of Ohio. Before any of the Service Provider's employees perform any work on the Project, Service Provider shall furnish Dublin with the Insurance Company's certificate that such coverage has been provided and each certificate shall contain the required limits. Dublin shall be specifically named and included as an additional insured party under all coverage required by this Agreement and coverage for such additional insured shall also be amended to include a waiver of subrogation and primary and noncontributing endorsements in favor of the additional insured.

The types of insurance, and minimum amount of limits, required hereunder are:

- (A) Workers' Compensation Insurance coverage: statutory requirements in the State of Ohio.
- (B) Employers Liability Insurance with limits of not less than \$1,000,000 to anyone person: USL&H; FELA; Jones Act; and, Continental Shelf Act Endorsements, if applicable.
- (C) Commercial General Liability Insurance, written on an occurrence form:
 - Standard Limits
 - Excess Liability Policy, if applicable: \$____,000,000.
 - Professional Liability, if applicable, \$1,000,000 Each Occurrence, with not less than a Five Year Completed Operations period if claims-made coverage.
 - Other policies.

NUMBER OF POLICIES

Commercial General Liability insurance and other liability insurance may be arranged under a single policy for the full limits required or by a combination of underlying policies with the balance provided by an Excess or Umbrella Liability Policy. The Umbrella Liability coverage must be as broad or broader than the Primary Insurance Policies.

PROPERTY INSURANCE

Service Provider is responsible to provide insurance coverage for tools, equipment or personal belongings that are owned or leased by the Service Provider or its employees at Service Provider's own expense. Service Provider accepts and shall bear the risk of loss for its property, material, or equipment, which is stored on-site and off-site.

SUBROGATION

Service Provider on behalf of itself, its insurers, successors and assigns does hereby waive any and all rights of subrogation against Dublin relating to or arising from any loss or damage which is within any insurance coverage of Service Provider, regardless of whether a claim has been submitted to or denied by the insurer.

INDEMNIFICATION AND DUTY TO DEFEND

Except to the extent expressly prohibited by statute, Service Provider agrees to fully indemnify and hold harmless Dublin and its elected officials, agents, officers, representatives, attorneys, employees, volunteers, indemnities, independent contractors and invitees from and against any and all claims, causes of action, amounts, damages, demands, expenses, judgments, liabilities, losses, obligations, proceedings and costs, including actual attorneys' fees, expert witness fees and costs incurred, that in whole or in part, arise out of, involve, result from, relate to or are alleged to have been caused by:

- (a) The performance of any aspect of the Work by Service Provider or any of its subcontractors, independent contractors, suppliers, manufacturers, materialmen or persons or entities for whose acts Service Provider is or may be liable and/or their respective agents and/or employees;
- (b) Act(s), failure(s) to act, omission(s) or negligence of or by Service Provider or any of its subcontractors, suppliers, manufacturers, materialmen or persons or entities for whose acts Service Provider is or may be liable and/or any of their respective agents and/or employees.
- (c) Injury or death to persons or damage to property which arises out of, involves, results from, relates to or is caused by, in whole or in part, any action(s), inaction(s) and/or negligence of or by Service Provider or any of its subcontractors, independent contractors, suppliers, manufacturers, materialmen or persons or entities for whose acts Service Provider is or may be liable and/or any of their respective agents and/or employees.
- (d) The failure of Service Provider to pay its subcontractors, suppliers, materialmen, laborers, union fringe benefits or any other obligation arising in the performance of the Work.

This indemnification provision shall not be construed to negate, abridge or reduce any other rights of Dublin and its elected officials, agents, officers, representatives, attorneys, employees, volunteers, indemnities, independent contractors and invitees.

In the event that any such claims, loss, cost, expense, liability, damage or other injury arise or are made or threatened against any indemnity hereunder, Dublin shall have the right to withhold any payments due or to become due to Service Provider an amount sufficient in its judgment and sole discretion to protect and indemnify in accordance with this provision against any and all such claims, loss, damage, cost and expense.

All indemnity obligations set forth in this Agreement shall survive the termination of this Agreement or the completion of Service Provider's Work.

CHANGES, CLAIMS AND DELAYS

CHANGES

Change to Agreement

Without invalidating this Agreement, Dublin may change, add to or reduce the Work to be performed hereunder. Any such change may be authorized as set forth herein.

Change Order

A Change Order is a document prepared by Dublin and signed by Service Provider stating their agreement upon the change in the scope of the Work, adjustment in the Contract Price and/or to the Project Schedule.

Adjustment in Contract Price

Service Provider shall not be entitled to receive compensation for extra work, materials or changes of any kind regardless of whether ordered by Dublin or Dublin's Representative, unless a written Change Order has been previously issued and signed by Dublin. If a change was ordered by Dublin or Dublin's Representative, and Service Provider performed but did not receive a written Change Order, Service Provider shall be deemed to have waived any claim for extra compensation, including anything related to schedule impacts or lost productivity, regardless of any written or verbal protests or claims by Service Provider. Dublin's issuance of a signed, written Change Order shall be deemed and construed as a condition precedent to Service Provider's filing of a valid claim for extra compensation as a result of Service Provider's performance of any work not originally included as part of the original scope of Work. If a Change Order requires an adjustment in the Contract Price, the adjustment shall be established by one of the following methods:

- (a) mutual agreement on a lump sum, which shall be supported by sufficient information submitted by Service Provider to substantiate the amount, including specifically a labor, material, equipment and Service Provider's cost breakdown;
- (b) unit prices already established in the Agreement or if not established by the Agreement then established by mutual agreement for the adjustment;
- (c) on a time and material basis or, if none, then as otherwise allowed by the Contract Documents, or, if none, as jointly acceptable.

(d) for overtime work, Service Provider shall only be entitled to recover the premium time differential without mark-up of any kind.

Agreement on any Change Order shall constitute a final settlement, and full accord and satisfaction, of all matters relating to the change in the Work that is the subject of the Change Order, including, but not limited to, the cumulative effect on the Project of all change orders issued to the date thereof, all direct and indirect costs, home office overhead and any and all adjustments to the Contract Price or Project Schedule.

CLAIMS

Claim

A claim is a demand or assertion made in writing by Dublin or Service Provider seeking an adjustment to the Contract Price and/or Project Schedule, an adjustment or interpretation of the Agreement's terms, or other relief arising under or relating to this Agreement, including the resolution of any matters in dispute between Dublin and Service Provider in connection with the Project.

Timing of Claims

Claims by Service Provider must be made within 21 days after occurrence of the event giving rise to such Claim. Claims must be initiated by written notice to Dublin and must be submitted through the "Statement of Claim" Form attached As Exhibit A to this Agreement. Any submitted "Statement of Claim" Forms must be complete, accurate and contain all information requested by the "Statement of Claim" Form. Failure by Service Provider to present written claims within 21 days of the event giving rise to the claim through the "Statement of Claim" shall constitute an express waiver of any rights to additional time, money or other relief.

Claim Documentation

All Claims presented or submitted by Service Provider shall include all supporting documentation and information to allow Dublin to evaluate the Claim. Dublin may request any additional documentation or information from Service Provider (whether maintained in any form or medium) to assist in assessing and evaluating Service Provider's Claim, and Service Provider agrees to provide the same.

Within ten (10) days of its receipt of a written request, Service Provider shall make available to Dublin or Dublin's Representative any books, records or other documents or information in its possession, custody or control relating to any Claim. Service Provider shall also require its subcontractors and suppliers, regardless of tier, to do likewise.

DELAYS/TIME IMPACT

Should Service Provider delay the progress of the Work so as to cause Dublin to suffer or become liable for any damages, Service Provider agrees to pay to Dublin the full amount of any and all such damages. Such damages, at Dublin's option, may be deducted from any payments due, or which become due, under the Agreement. Nothing in this paragraph shall limit Dublin's right to claim all actual damages sustained by it as a result of Service Provider's delay. In addition, Dublin may terminate this Agreement for default as provided in Article 13 herein.

Dublin shall have the right, at any time, to delay or suspend the start or prosecution of the whole or any part of the Work under this Agreement, or to vary the sequence of performance thereof. Progress schedules may from time to time be modified to conform to contract completion requirements.

Dublin shall not be liable to Service Provider for delay to Service Provider's Work by reason of fire or other casualty; or on account of riots or of strikes, or other combined action of the workmen or other persons; or on account of any acts of God; or any other cause, whether foreseen or unforeseen, beyond Dublin's control.

All schedules incorporated into the Contract Documents or provided during the course of the performance of the Work are provided for the Service Provider's convenience. Dublin does not warrant or guarantee such Schedule(s) and Service Provider should not rely upon the sequence or duration of activities as set forth therein for any purpose, including the pricing of the Work. Service Provider specifically acknowledges that the sequence and duration of activities set forth in the Schedule(s) typically change on projects of this size, nature and complexity, and that they are likely to change on this Project. Dublin shall have the right to determine and, if necessary, change the time, order and priority in which the various portions of the Work is to be performed and all other matters relative to the timely and orderly conduct of the Work.

PAYMENT

GENERAL PROVISIONS

Schedule of Values

If the Agreement is not a unit price agreement, then the Service Provider shall prepare and submit to the Contractor prior to the due date for the submission of Service Provider's first application for payment, a Schedule of Values apportioned to the various divisions or phases of the Work. The Schedule of Values shall include line items for each portion of the Work. Each line item contained in the Schedule of Values shall be assigned an appropriate monetary price such that the total of all such items shall equal the Contract Price. The Schedule of Values shall be prepared in such detail as may be required by Dublin.

Payment Use and Verification

Service Provider is required to pay for all labor, materials, and equipment used in the performance of the Work. Reasonable evidence, satisfactory to Dublin, may be required to show that all obligations relating to Subcontract Work are current before releasing any payment due to Service Provider. If required by Dublin, before final payment is made for the Work, Service Provider shall submit evidence satisfactory to Dublin that all payrolls, bills for materials and equipment, and all known indebtedness connected with the Agreement and the Work, have been paid or otherwise satisfied.

Taxes

Service Provider agrees to withhold all municipal income taxes due or payable under the provisions of Chapter 181 of the Codified Ordinances of Dublin, Ohio, for wages, salaries and commissions paid to its employees and further agrees to require that all of its subcontractors shall also withhold any such municipal income taxes due under such chapter for any work completed or services performed related to this Project.

Payment Not Acceptance

Payment to Service Provider by Dublin does not constitute or imply acceptance of any portion of the Work.

PROGRESS PAYMENTS

Applications

Service Provider's Applications for Payment shall, unless otherwise required by Dublin or the Contract Documents, be submitted on the AIA 0702 form and shall be itemized and supported by the Service Provider's Schedule of Values, unit prices, and any other substantiating data as required by Dublin.

Partial Lien Waivers and Affidavits

Service Provider shall obtain from all of its subcontractors, vendors and suppliers, regardless of tier, a waiver of claim under the relevant mechanic's lien laws for the Project of all claim or lien rights for the amounts for which they have received payments with respect to the Project in the form attached hereto as Exhibit B to the Agreement.

Rejection of Service Provider's Payment Application

Dublin may reject a Service Provider's payment application or nullify a previously approved payment application, in whole or in part, as may reasonably be necessary to protect Dublin from loss or damage based upon:

- (a) Service Provider's repeated failure to perform the Work as required by the Contract Documents;
- (b) loss or damage arising out of or relating to the Contract Documents and caused by Service Provider to Dublin;

- (c) Service Provider's failure to properly pay for labor, materials, equipment or supplies furnished in connection with the Work;
- (d) rejected, nonconforming or defective Work, which has not been corrected in a timely fashion;
- (e) reasonable evidence of delay in performance of the Work such that the Work will not be completed in accordance with the Project Schedule, and that the unpaid balance of the Contract Price is not sufficient to offset the additional costs or damages that may be incurred by Dublin as a result of the anticipated delay caused by Service Provider;
- (f) reasonable evidence demonstrating that the unpaid balance of the Contract Price is insufficient to cover the cost to complete the Work; or
- (g) third party claims involving Service Provider or reasonable evidence demonstrating that third party claims are likely to be filed unless and until Service Provider furnishes Dublin with adequate security in the form of a surety bond, letter of credit or other collateral or commitment which are sufficient to discharge such claims if established.

Payment Amount

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

1. The portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Price allocated to that portion of the Work in the schedule of values, less retainage of ten percent (10%). Pending final determination of cost to Dublin of changes in the Work, amounts not in dispute shall be included and paid upon approval and payment by Dublin.
2. The progress payment amount shall be further modified under the following circumstance: (a) Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Price, less such amounts as Dublin shall determine for incomplete Work, retainage applicable to such Work and unsettled claims.
3. Dublin shall not make advance payments to Service Provider for materials or equipment, which have not been delivered and stored at the site unless the Contract Documents allow otherwise.

Time of Application

For each progress payment period, Service Provider shall submit its progress payment application to Dublin for the Work performed to date no later than the fifth day of each month, unless otherwise agreed.

Stored Materials and Equipment

To the extent permitted by the Contract Documents, applications for payment may include materials and equipment not incorporated into the Work. Approval of payment applications for materials and equipment stored on or off the site shall be conditioned on submission by Service Provider of bills of sale and applicable insurance or such other procedures satisfactory to Dublin to establish the proper valuation of the stored materials and equipment.

Time of Payment

Dublin shall make progress payments for all undisputed amounts to Service Provider for satisfactory performance of the Work no later than twenty (20) calendar days after receipt of Service Provider's complete payment application.

FINAL PAYMENT**Application**

Service Provider may submit its final payment application to Dublin upon acceptance of the Work by Dublin, and upon Service Provider furnishing evidence of fulfillment of the Service Provider's obligations in accordance with the Agreement.

Requirements

When submitting its final payment application, Service Provider shall furnish the following to Dublin:

- (a) the Final Waiver of Lien form attached hereto as Exhibit C. Such form shall be in the amount of the application for final payment and be accompanied by the same Final Lien Waiver form executed by Service Provider's subcontractors, materialmen and suppliers;
- (b) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which Dublin might in any way be liable, have been paid or otherwise satisfied;
- (c) consent of Service Provider's surety to final payment, if applicable and required;
- (d) satisfaction of closeout procedures required by Dublin;

- (e) current certificates of insurance establishing that all insurance coverage required by the Agreement shall remain in effect through the final acceptance of the Project by Dublin, or such later date as may be required by the Contract Documents, and that such coverage will not be materially altered, expire or terminate without thirty (30) days prior certified mail notice thereof; and
- (f) other data if required by Dublin, such as receipts, releases, and waivers of liens effective upon payment. Acceptance of final payment by Service Provider shall constitute a waiver of any and all claims (whether known or unknown) by Service Provider except those previously made in writing and identified by Service Provider as unsettled at the time of final application for payment.

Time of Payment

Final payment of the undisputed balance due of the Contract Price shall be made to Service Provider within ten (10) calendar days after receipt of all information required under Section 12.3 of this Agreement.

DISPUTE RESOLUTION

INITIAL DISPUTE RESOLUTION

If a dispute arises out of, or relates to this Subcontract or the alleged breach thereof, the parties shall endeavor to settle the dispute first through direct discussions by and between the parties respective Project Managers or principals.

If the dispute cannot be settled through direct discussions, the parties shall then endeavor to settle the dispute by mediation in accordance with the Construction Industry Mediation Rules of the American Arbitration Association. Notice of demand for mediation shall be filed in writing with the other party to this Agreement with the American Arbitration Association. The demand for mediation shall be made within a reasonable time after written notice of the claim, dispute or other matter in question has been given, but in no event shall it be made when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statutes of limitation. The location of the proceedings shall be in Dublin, Ohio, unless the parties agree otherwise. The parties shall share all costs of the mediation equally.

ARBITRATION/LITIGATION

In the event that a dispute is not resolved as set forth above, Dublin shall have the right, in its sole and exclusive discretion, to elect whether the dispute will then be decided by arbitration or litigation. In the event that Dublin should elect to resolve the dispute through Arbitration it shall so notify Service Provider in writing. The parties will then meet or confer to reach agreement on an arbitrator. The arbitration shall be conducted in general conformity with the Construction Industry Rules of the American Arbitration Association, however, the American Arbitration Association shall not administer the arbitration. The locale of any arbitration hearing shall be Dublin, Ohio. Any award rendered in the arbitration shall be final and binding upon the parties and may be enforced in any court of competent jurisdiction.

In the event that Contractor should elect to resolve the dispute through litigation jurisdiction thereof shall reside exclusively with the Common Pleas court of Franklin County, Ohio.

PREVAILING PARTY

In the event of any arbitration, the prevailing party shall be awarded its share of the arbitration costs and arbitrator compensation. For the purpose of the application of this provision, the arbitrator(s) shall determine the prevailing party as follows: the prevailing party shall be that party who's last written settlement position (demand/offer) made before the commencement of the arbitration hearing(s) is closest to the final award rendered by the arbitrator(s). In order to be considered for the purpose of this provision, any settlement position (demand/offer) must be in writing and must have been delivered

by certified mail to the other party. It is the intent of this provision for the arbitrator(s) to identify the true party prevailing in any arbitration proceeding. To that end, in the event that a party seeking relief has not taken a settlement position, i.e. the claimant, the arbitrator(s) shall consider the settlement demand to be the full relief requested in the arbitration demand. In the event that the respondent has not taken a settlement position, the arbitrator(s) shall consider the offer to be a complete rejection of the relief requested by the claimant. Where there are mixed claims and counterclaims, the determination of the prevailing party shall be within the discretion of the arbitrator(s) consistent with the intent of this provision."

WORK CONTINUATION AND PAYMENT

Service Provider shall carry on the Work and maintain the Project Schedule pending final resolution of a Claim including mediation, arbitration or litigation, unless the Agreement has been terminated or the Work suspended as provided for in the Agreement, or the parties otherwise agree in writing to a partial or total suspension of the Work. If Service Provider is continuing to perform in accordance with the Agreement, Dublin shall continue to make undisputed payments as required by the Agreement.

RECOURSE BY DUBLIN FAILURE OF PERFORMANCE

Notice to Cure

If Service Provider refuses or fails to supply enough properly skilled workers, proper materials, or maintain the Project Schedule, or it fails to make prompt payment to its workers, subcontractors or suppliers, disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a breach of a provision of this Agreement, Service Provider may be deemed in default of this Agreement. If Service Provider fails within three (3) working days after written notification to commence and continue satisfactory correction of such default, with diligence and promptness, then Dublin without prejudice to any other rights or remedies, shall have the right to any or all of the following remedies:

- (a) supply such number of workers and quantity of materials, equipment and other facilities as Dublin deems necessary for the satisfactory correction of such default, which Service Provider has failed to complete or perform after the aforesaid notice, and charge the cost thereof to Service Provider, who shall be liable for the payment of same including reasonable overhead and profit;
- (b) contract with one or more additional contractors, to perform such part of the Work, as Dublin shall determine will provide the most expeditious correction of the default and charge the cost thereof to Service Provider;

- (c) without further notice to Service Provider, withhold payment of monies due the Service Provider in accordance with this Agreement; and
- (d) in the event of an emergency affecting the safety of persons or property (as determined in Dublin's sole discretion), Dublin may correct such default, without first giving three (3) working days' written notice to Service Provider, but shall give prompt written notice of such action to Service Provider, and charge the cost thereof to the Service Provider.

Service Provider agrees to indemnify and hold Dublin harmless from and against any and all damage, loss, cost or expense, including the actual attorneys' fees incurred, arising from or relating to the default of Service Provider, regardless of whether Service Provider cures the default or is ultimately determined not to have been in default of its obligations under this Agreement, in which event the termination shall be deemed to have been a termination for Dublin's convenience.

Termination by Dublin Termination for Default/Cause

If Service Provider fails to commence and satisfactorily continue correction of a default within three (3) working days after written notification from Dublin, then the Agreement may be terminated and Dublin may use any materials, implements, equipment, appliances or tools furnished by or belonging to Service Provider to complete the Work. Dublin shall issue a written notice of termination to Service Provider at the time the Agreement is terminated.

Dublin may also furnish those materials, equipment, and/or employ such workers or subcontractors, as Dublin deems necessary to maintain the orderly progress of the Work. Service Provider hereby consents to the assignment of its subcontracts or agreements which Dublin, in its sole discretion, deems necessary for the orderly progress of the Work, immediately upon the issuance of a determination of default.

All costs incurred by Dublin in performing the Work, shall be deducted from any monies due or to become due Service Provider under this Agreement. Service Provider shall be liable for the payment of any amount by which such expense may exceed the unpaid balance of the Contract Price.

Termination for Convenience

Dublin shall have the right to terminate this Agreement for its convenience by providing Service Provider with written notice thereof. Upon Service Provider's receipt of such notification it shall immediately cease work on the Project and take all steps reasonably available to minimize the cost of termination. In the event of such termination, Service Provider shall be entitled to receive as full and complete compensation the value of Work that is properly completed up to the date of termination as identified on the schedule of values, the cost of any stored material not previously paid for or incorporated in the Work which can not be returned or restocked, and reasonable direct costs of demobilization.

Service Provider shall not be entitled to compensation for any field or home office overhead or any profit on work not performed.

In the event that any court or arbitration panel should determine that a termination of Service Provider by Contractor for cause was a breach of the Agreement, any such termination shall immediately be converted to a termination for convenience and Service Provider's damages shall be so calculated.

Use of Service Provider's Equipment

If Dublin performs work under this Article, or subcontracts such work to be so performed, Dublin and/or the persons to whom work has been subcontracted shall have the right to take and use any materials, implements, equipment, appliances or tools furnished by, belonging or delivered to Service Provider and located at the Project for the purpose of completing any remaining Work. Immediately upon completion of the Work, any remaining materials, implements, equipment, appliances or tools not consumed or incorporated in performance of the Work, and furnished by, belonging to, or delivered to the Project by or on behalf of Service Provider, shall be returned to Service Provider in substantially the same condition as when they were taken, normal wear and tear excepted.

BANKRUPTCY

Termination Absent Cure

Should there be filed by or against Service Provider a petition in bankruptcy, or for a reorganization, or should Service Provider become insolvent or be adjudicated as bankrupt or go into receivership, liquidation or dissolution, either voluntarily, involuntarily or under court order, or make a general assignment for the benefit of creditors, or otherwise acknowledge insolvency, then in any such event, each of which shall constitute a default hereunder on the Service Provider's part, Dublin shall have the right, in addition to any other rights and remedies provided by this Agreement, the Contract Documents or by law, to proceed in accordance with the provisions of Article 14 of this Agreement.

Interim Remedies

If Service Provider is not performing in accordance with the Project Schedule at the time a petition of bankruptcy is filed, or at any subsequent time, Dublin may avail itself of such remedies under this Article as are reasonably necessary to maintain the Project Schedule.

EQUAL OPPORTUNITY EMPLOYMENT

Service Provider shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age or national origin. Service Provider shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, age or national origin.

Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Service Provider agrees to post in conspicuous places, available to employees and applicants for employment, notices, which may be provided by Dublin setting forth the provisions of this equal opportunity pledge and commitment.

Service Provider shall comply with all provisions of the DPW Regulation on EEO, and the implementing rules, regulations and applicable orders of the State Equal Employment Opportunity Coordinator.

DUBLIN/OWNER:

SERVICE PROVIDER:

CITY OF DUBLIN, OHIO

By: _____

By: _____

Its: _____

Its: _____

Date: _____

Date: _____

APPROVED AS TO FORM:

Law Director

Date: _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned (the "Principal") and _____ (the "Surety"), are hereby held and firmly bound unto the City of Dublin, Ohio ("Dublin") in an amount not to exceed one hundred percent (100%) of the agreed contract amount for the payment of which well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE ABOVE OBLIGATION is such, that whereas the Principal did on this _____ day of _____, **20** __, enter into a contract with Dublin which said contract is made a part of this bond the same as though set forth herein;

NOW, if the Principal shall well and faithfully do and perform the things agreed by the Principal to be done and performed according to the terms of said contract; and shall pay all lawful claims of subcontractors, material men and laborers, for labor performed and materials furnished in the carrying forward, performing or completing of said contract; we agreeing and assenting that this undertaking shall be for the benefit of any material man or laborer having a just claim, as well as for Dublin; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety of any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The Surety for value received, hereby stipulates and agrees that no modifications, omissions, or additions in or to the terms of the contract or to the work to be performed there under or in or to the plans or specifications therefore shall in any wise affect the Surety's obligations on this bond.

Signed this _____ day of _____, **20**__.

PRINCIPAL: _____

By: _____
(Signature)

Print Name: _____

Title: _____

Address: _____

Telephone: () _____

SURETY: _____

By: _____
(Signature)

Print Name: _____

Title: _____

Address: _____

Telephone: () _____

SURETY AGENT: _____

By: _____
(Signature)

Print Name: _____

Title: _____

Address: _____

Telephone: () _____

CERTIFICATION OF FUNDS

Dublin City Hall Interior Renovation Phase 2 & 3
at 5200 Emerald Parkway, Dublin, Ohio 43017

I, Angel Mumma, Director of Finance of the City of Dublin, Ohio, certify that:

1. The Council of the City of Dublin, Ohio has appropriated \$_____ for the above-referenced project by Resolution No. _____ adopted on _____, 2013.
2. The amount so appropriated is on deposit or in the process of collection to the credit of the appropriate fund free from any outstanding obligations.

CITY OF DUBLIN, OHIO

Date: _____

By: _____

Angel Mumma
Deputy City Manager/Director of Finance

NOTICE TO PROCEED
Not Applicable ____

Dublin City Hall Interior Renovation Phase 2 & 3
5200 Emerald Parkway, Dublin

To: _____

You are hereby notified to commence work within ten (10) business days from the date of receipt of this Notice to Proceed. You are required to complete the work as follows:

Phase 2: Start Date: Tue 8/13/2013 Completion Date: Fri 9/6/2013
Phase 3: Start Date: Mon 8/26/2013 Completion Date: Mon 9/23/2013

Return an acknowledged copy of this Notice to Proceed to:

Brian Ashford
Administrative Services - Facilities
6555 Shier Rings Road
Dublin, Ohio 43016

CITY OF DUBLIN, OHIO

Date: _____

By: _____

Brian Ashford
Facilities Manager

RECEIPT OF NOTICE TO PROCEED

Receipt of this Notice to Proceed is hereby acknowledged this ____ day of _____, 2013.

Company Name: _____

Signature: _____

Print Name: _____

Title: _____

NOTICE OF COMMENCEMENT OF PUBLIC IMPROVEMENT

Not Applicable ____

Section 1311.252, Ohio Revised Code

Notice is hereby given of the commencement of a public improvement as follows:

- 1. The public improvement is identified as:

Project Name:

Dublin City Hall Interior Renovation Phase 2 & 3

Project Number:

Location: **5200 Emerald Parkway**

- 2. The public authority responsible for the public improvement is:

City of Dublin, Ohio
5200 Emerald Parkway
Dublin, Ohio 43017

- 3. The principal contractor and its surety on the public improvement are as follows:

Principal Contractor: _____	Surety: _____
Name _____	Name _____
Address _____	Address _____
City, State _____	City, State _____
Zip Code _____	Zip Code _____
Telephone Number _____	Telephone Number _____

- 4. The City of Dublin, Ohio first executed a contract with a principal contractor for the public improvement on _____ 2013.

5. The name and address of the representative of the City of Dublin, Ohio upon whom service may be made for the purposes of serving an affidavit pursuant to Section 1311.26 of the Ohio Revised Code is:

**Brian Ashford, Facilities Manager
Facilities Department
6555 Shier Rings Road
Dublin, Ohio 43016**

CITY OF DUBLIN, OHIO

By: _____
**Brian Ashford
Facilities Manager**

Sworn to and subscribed before me this _____ day of _____, **2013**.

Notary Public

CHANGE ORDER

**Dublin City Hall Interior Renovation Phase 2 & 3
5200 Emerald Parkway**

Change Order No. _____ Contractor Name: _____

Date: _____

Agreement Date: _____

The following changes are made to the contract documents:

The changes are made for the following reasons:

Change to contract price:

Original contract amount: \$ _____

Current contract amount
adjusted by previous

Change Orders: \$ _____

The contract will be (circle one:
increased/decreased) due to this
Change Order by:

\$ _____

New contract amount (including
this Change Order):

\$ _____

Change to contract time:

The contract time will be (circle one: increased/decreased) due to this Change Order by _____ calendar days.

The date for completion of all work will be _____, **2013**.

This Change Order is signed this _____ day of _____, **2013**.

CONTRACTOR

CITY OF DUBLIN, OHIO

By: _____

Marsha I. Grigsby
City Manager

By: _____
(signature)

Print Name: _____

By: _____

Brian Ashford
Facilities Manager

Title: _____

By: _____

Angel Mumma
Director of Finance

SECTION 4 SPECIFICATIONS

SECTION 01 23 00

ALTERNATES

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Definitions and Explanations: "Alternates" are defined as alternate products, materials, equipment, systems, methods, units of work or major elements of the construction, which may, at Owner's option and under terms established by Instructions to Bidders and in the Contract or Agreement, be selected for the work in lieu of corresponding requirements of Contract Documents. Selection may occur prior to Contract date, or may, by the Agreement, be deferred for possible selection at a subsequent date. Alternates may or may not change scope and general character of the work substantially. Requirements of this section may be related to, but must not be confused with, requirements of Contract Documents related to "allowances", "unit prices", "change orders", "substitutions" and similar provisions.
1. Refer to the Contract, and subsequent modifications thereof, for determination of which several scheduled "Alternates" herein have been accepted, and, therefore, are in full force and effect as though included originally in the contract documents for the base bid.
 2. The Owner reserves the right to accept or reject any Alternate at the time of awarding the Contract. If, during the progress of the Work, it should become desirable to reinstate any Alternate not included in the Contract, the Owner reserves the right to reinstate the Alternate at the price bid by the Contractor provided that such actions taken in sufficient time as not to delay the progress of the work.
- B. Notification: Immediately following the award of the Contract, prepare and distribute to each entity to be involved in performance of the work, a notification of the status of each alternate scheduled herein and including those subsequently added by notification during bidding. Indicate which alternates have been: 1) accepted, 2) rejected, and, 3) deferred for consideration at a later date as indicated. Include full description of negotiated modifications to alternates, if any.
- C. General: The descriptions herein for each alternate are recognized to be incomplete and abbreviated, but imply that each change must be complete for the scope of work affected. Refer to all other applicable specification sections and to applicable drawings, for specific requirements of the work, regardless of whether references are so noted in the description of each alternate. It is recognized that descriptions of alternates are primarily scope definitions, and do not necessarily detail full range of materials and processes needed to complete the work as required.

1.02 SCHEDULE OF ALTERNATES

A. General: Indicate in the spaces provided on the Form of Proposal the amount to be added to the Base Bid.

1. Alternate No. 1: Sliding/Fixed Panels at Existing Opening

a. This alternate includes all work required to install sliding and fixed panels at opening. See Section 06 60 10 – Plastic Fabrication Systems.

b. Base Bid: Opening is being infilled with metal stud gypsum board wall. Lobby side of infill wall to be covered with fabric wrapped acoustic panels; other side to be painted. Base Bid includes 4' w x 2' h acrylic sign with logo, mounted on stand-offs.

END OF SECTION

SECTION 01 33 23

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.02 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.03 GENERAL REQUIREMENTS

- A. Requirements of this Section are in addition to the requirements of the General Conditions.
- B. This Section includes procedures for processing:
 - 1. Shop drawings.
 - 2. Product data.
 - 3. Samples.
 - 4. Certificates of compliance.
 - 5. Reports.
 - 6. Design data.
 - 7. Other submittals listed.
- C. Submittals as approved do not constitute a change order.
- D. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

- a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- E. Make all submittals far enough in advance of scheduled dates for installation to provide sufficient time for reviews, for securing necessary approvals, for possible revisions and resubmittals, and for placing orders and securing delivery.
1. Delays caused by the tardiness of the Contractor in preparing and forwarding submittals will not be an acceptable basis for an extension of the Contract completion date or for consideration of alternate products which do not meet the specified requirements of this Project Manual.
 2. Initial Review: Allow 14 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 3. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 4. Resubmittal Review: Allow 14 days for review of each resubmittal.
 5. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is necessary, allow 14 days for initial review of each submittal.
 6. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 14 days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.
- F. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number.
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Other necessary identification.

- G. Notify Architect in writing at time of submittal of deviations from the requirements of the Contract Documents. In addition, highlight, encircle, or otherwise specifically identify deviations.
- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
1. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Drawing number and detail references, as appropriate.
 - j. Submittal and transmittal distribution record.
 - k. Remarks.
 - l. Signature of transmitter.
 2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.
- I. Resubmittals: When Architect requires that a submittal be resubmitted, comply with requirements of this section.
1. Identify changes made since the previous submittal.
- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- K. Electronic Files: At Contractor's written request, copies of Architect's electronic files will be provided to Contractor for Contractor's use in connection with Project, subject to the following conditions:
1. Execute Electronic File Transfer Agreement provided by the Architect to obtain files.
 2. The electronic files are provided for the Contractor's convenience and their use will be at the Contractor's risk.
 - a. There are no assurances that the information in the electronic files is current. All dimensions must be field-verified.

1.04 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- B. Product Data
 - 1. Submit only pages which are pertinent.
 - a. Mark each copy of standard printed data to identify pertinent products, referenced to Specification Section and Article number.
 - b. Show reference standards, performance characteristics, and capacities; wiring and piping diagrams and controls; component parts; finishes; dimensions; and required clearances.
 - 2. Modify manufacturer's standard schematic drawings and diagrams to supplement standard information and to provide information specifically applicable to the work. Delete information not applicable.
 - 3. Stamp and sign each set of manufacturer's product data before submitting to Architect to certify compliance with Contract Documents.
 - 4. Number of Copies Required: Submit two paper copies of Product Data, and in portable data file (.pdf) format, unless otherwise indicated. When submitting for Concurrent Consultant Review, submit two copies to Consultant and one copy to Architect. Architect will return one copy. Mark up and retain returned copy as a Project Record Document.
 - a. Reproduction and cost of reproduction of processed Product Data for distribution to concerned parties is Contractor's responsibility.
- C. Shop Drawings
 - 1. Reproduction of any portion of the Contract Documents for use as submittals for Shop Drawings is not acceptable.
 - 2. Submit Shop Drawings in a clear and thorough manner.
 - a. Title each drawing with Project name.
 - b. Identify each element of drawings by reference to sheet number and detail, schedule, or room number of Contract Documents.
 - 3. Identify the following:
 - a. Requirements of the individual section of Project Manual.
 - b. Field measurements.
 - c. Field construction criteria.
 - d. Relation to adjacent or critical features of the Work or products.
 - e. Conformance of submittal with requirements of Contract Documents.
 - 4. Each sheet of Shop Drawings shall be stamped and signed by Contractor before submitting to Architect. Certify compliance with requirements of Contract Documents.
 - 5. Review by the Architect shall not relieve Contractor from his responsibility in preparing and submitting proper Shop Drawings in accordance with his current obligations.

6. All submissions which, in the opinion of the Architect are incomplete, contain errors or have not been checked or only superficially checked, will be returned unchecked by the Architect for resubmission.
 7. Fabrication of products or start of work before required Shop Drawings are approved by Architect and returned to Contractor shall be at Contractor's risk.
 8. Number of Copies Required: Submit two paper copies of each submittal, and in portable data file (.pdf) format, unless indicated otherwise. When submitting for Concurrent Consultant Review, submit two copies to Consultant and one copy to Architect. Architect will return one copy. Mark up and retain one returned copy as a Project Record Drawing.
 - a. Reproduction and cost of reproduction of processed Shop Drawings for distribution to concerned parties is Contractor's responsibility.
 - b. This procedure is to be followed for each submission of a drawing or group of drawings until they are finally approved by the Architect.
- D. Office Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 4. Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples Required: Submit two sets of Samples. Architect will retain one Sample set; the other will be returned.

- 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least two sets of paired units that show approximate limits of variations.
- E. Mock-Up Samples: Where samples are specified in the individual specification sections for use in constructing mock-ups, comply with requirements for "Office Samples", and process transmittal forms for mock-ups to provide a record of activity.

1.05 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
1. Number of Copies: Submit one copy of each submittal, unless otherwise indicated. Architect will not return copy.
 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
- B. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- C. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- D. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- E. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- F. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- G. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

- H. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- I. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- J. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- K. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- L. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment.
- M. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
 - 1. Preparation of substrates.
 - 2. Required substrate tolerances.
 - 3. Sequence of installation or erection.
 - 4. Required installation tolerances.
 - 5. Required adjustments.
 - 6. Recommendations for cleaning and protection.
- N. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- O. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Architect, except as required in "Action Submittals" Article.

PART 2 PRODUCTS

Not Applicable

PART 3 EXECUTION

3.01 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

3.02 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Reference the General Conditions for Architect's review responsibilities. Approval of a specific item does not indicate approval of an assembly of which the item is a component. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. REVIEWED
 - 2. APPROVED
 - 3. APPROVED AS CORRECTED
 - 4. REVISE AND RESUBMIT
 - 4. REJECTED.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION

SECTION 01 35 13

SPECIAL PROJECT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. The existing building will remain occupied during construction. No interruption of services offered by the Owner is permitted. Consult and carefully schedule with the Owner to achieve this aim.

1.02 PROCEDURES IN OPERATIONAL BUILDING

A. Occupancy of Building

1. The existing building will be occupied throughout the entire course of construction. As such, contractors and their personnel are restricted to construction areas of the building only.
2. Access to areas within the work area of the project which must occur through occupied areas or over occupied areas must be coordinated with the Owner's Representative and the Architect so as to allow spaces to be vacated in time for the work to be accomplished, approximately 48 hours advance notice is required.
 - a. Where the Owner vacates to allow work in an area, services and utilities may be cut as long as the continuity of that service does not affect other areas. Access must be maintained to all other areas in a safe and sanitary manner.
 - b. Perform work with cooperation and consideration toward occupants and caution toward existing finishes. Clean-up of work areas in occupied spaces shall be performed at the end of each work day. Debris will not be permitted to accumulate.
3. Operations which are particularly noisy or hazardous to building occupants must be scheduled during weekends or at night. Access to the building will be coordinated with the Owner's Representative and Architect who will generally allow work as required by the construction schedule throughout the normal work day, at night and on weekends as required.
 - a. The cost of work performed at times other than the "normal" working areas established for the project will be borne by the Contractor(s) involved. No additional payment will be due Contractors whose operations result in "premium" hour work.

- B. Conduct: Contractor and workmen under his/her control are to be quiet and non-offensive. Radios are prohibited.

C. Dress Code

1. Required Apparel: Shirt, long pants, shoes with laces; all suitably clean.
 2. Not Permitted: Offensive graphics or messages on clothing, short pants, tank tops, sandals, open toed shoes, bare torso, bare feet.
- D. Areas under construction shall be separated from occupied areas by suitable barriers. See Section 01 50 00 for additional requirements.
1. In no instances may a corridor be blocked nor it's clear width reduced either to less than 4'-0" or to less than the minimum exit width required in accordance with the Ohio Building Code, whichever is greater.
- E. No utilities or services may be interrupted without full consent of and prior scheduling with the Owner's representative. All functions of existing building must be maintained at all times unless specific written permission is obtained from the Owner. Critical functions include, but are not limited to:
1. Exits
 2. Utilities

1.03 UTILITY SHUT-DOWN

- A. Advance notice required: Contractor to request, a minimum 14 days in advance, Owner's permission to shut down electric power, gases or systems to occupied portions of the building. Request to be in writing and indicate the area(s) affected, time and date shut-down requested to commence, and anticipated duration of shut-down. Approved time and date may not be as requested, will be at times least disruptive to Owner, and may be during non-normal working hours.
1. Disclaimer: No additional payments will be allowed due to Contractor's difficulties due to being held to the above restrictions.

1.04 NOISE AND SAFETY

- A. Prohibited Methods: Prohibited methods and materials include, but are not limited to, the following:
1. Use of explosives.
 2. Use of jack hammers or similar equipment which can cause structure-borne vibration detrimental to the use of the occupied facilities.
- B. Construction noise limited to Normal Working Hours.

1.05 EXISTING FACILITIES

- A. Do not use existing telephone, vending machines, cafeteria, or other facilities.

1.06 NO SMOKING POLICY

- A. Smoking inside buildings is not permitted.

1.07 SITE AND BUILDING ACCESS

- A. Existing driveways and entrances which serve the premises must be maintained. They must be available to the Owner and public at all times. Do not use these areas for parking or storage of materials.
1. Do not unreasonably encumber the site with materials or equipment. Confine stock piling of materials and location of storage trailers to the areas indicated on the drawings or as directed by the Architect.
 2. Schedule deliveries so as to minimize space and time requirements for storage of materials and equipment on the site.

END OF SECTION

SECTION 01 45 00
QUALITY CONTROL

PART 1 GENERAL

1.01 GENERAL QUALITY CONTROL

- A. Maintain quality control over products, services, site conditions and workmanship, to produce work of specified quality.

1.02 WORKMANSHIP

- A. Comply with industry standards except where more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship required.
- B. Perform work by persons qualified to produce workmanship of specified quality.

1.03 MANUFACTURER'S INSTRUCTIONS

- A. When specification sections require that installation of work shall comply with manufacturer's printed instructions, a copy of the referenced instructions shall be maintained at the project site during installation and until completion and acceptance.
- B. Handle, install, connect, clean, condition, adjust and finish products in strict accordance with such instructions and comply with specified instructions.
 - 1. Should project conditions or specified requirements conflict with manufacturer's instructions, review with the Architect for further instructions.
 - 2. Do not proceed with work without clear instructions.

1.04 MANUFACTURER'S CERTIFICATES

- A. When required by specified sections, submit three copies of manufacturer's certificates that certify the products meet or exceed specified requirements.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 PROJECT CONDITIONS

- A. This Section is not intended to limit types and amounts of temporary construction facilities and controls required. Omission from this Section will not be accepted as an application that such temporary activity is not required for successful completion of the work and compliance with requirements of the Contract Documents.
- B. Provide and maintain each temporary construction facility and control when required for proper performance of the work. Terminate and remove when no longer needed or when permanent facilities, with proper authorization, are available for use.
- C. Obtain and pay for all required applications, fees, permits and inspections required for temporary construction facilities and controls.
- D. Install, operate, maintain and protect temporary construction facilities and controls in a manner and at locations which are safe, non-hazardous, sanitary and adequately protect project work, workmen and the public.

1.02 COST OF CONSUMED UTILITIES

- A. Water Service Use Charges: Water consumed during construction from the Owner's existing system is to be used without metering and without payment of use charges.
- B. Electric Power Service Use Charge: Electric power consumed during construction from the Owner's existing system is to be used without metering and without payment of use charges.

1.03 REQUIREMENTS OF REGULATORY AGENCIES

- A. Provide and maintain all temporary facilities in compliance with governing rules, regulations, codes, ordinances and laws of agencies and utility companies having jurisdiction over work involved in project.
- B. Be responsible for all temporary work provided, and obtain any necessary permits and inspections for such work.
- C. Contractors shall confine equipment, storage of materials, and operation of workmen to the limits indicated or directed and shall abide by law, ordinances, conditions stated in permits and directions of the Architect.

- D. Do not interfere with normal use of roads in vicinity of project site except as indicated or as absolutely necessary to execute required work, and then only after proper arrangements have been made with authorities having jurisdiction, including traffic control as applicable.

1.04 SPECIAL PRECAUTIONS AND REQUIREMENTS

- A. Do not interfere with normal use of occupied areas in existing buildings, existing driveway access to existing building and existing building utility services, except as absolutely necessary to execute required work involving such facilities, and then only after proper arrangements have been made through the Owner with persons in charge of existing facilities.
- B. Do not block required exits from existing buildings.

1.05 TEMPORARY FIELD OFFICES, TRAILERS AND TELEPHONE

- A. Provide and maintain clean weather tight offices at the site for own use and the Architect and at which location he/she or his/her authorized agent shall be present, or to which either may be readily called at all times while the work is in progress.
 - 1. Provide field office heated, lighted and provide with telephone service. All expenses in connection with the field office, including the installation cost and use cost of heat, air conditioning, light, water and janitor service.
- B. Copies of permits, approved shop drawings, plans and specifications marked up-to-date with all revisions and all addenda shall be kept at said offices areas ready for use at all times.
- C. All expenses in connection with Contractor's field offices shall be borne by the Contractor.
- D. Maintain field office areas until final acceptance and then remove, unless the Architect orders or approves earlier removal.
- E. Pay all costs, including utility installation costs to the field office.
- F. Provide and maintain such additional storage trailers on the project as required. Located where directed by the Architect.

1.06 TEMPORARY SANITARY FACILITIES

- A. Provide temporary portable toilets, acceptable to public health authorities, as required to service the project. Maintain in a clean, sanitary condition. Locate as directed by Architect.

1.07 TEMPORARY WATER SERVICE

- A. General: Water is available from a source located in the existing building.

- B. Provide temporary water distribution system from source point at existing building to construction area. Provide suitable fixtures at termination of system.
- C. Provide sufficient branch lines of adequate size to serve the needs of all trades. Locate water supplies at convenient locations, as directed by Architect.
- D. Provide insulated housings for temporary service lines to protect against freezing, when applicable.

1.08 TEMPORARY HEAT AND VENTILATION

- A. Provide as required to service the project.

1.09 TEMPORARY LIGHT AND POWER

- A. Provide necessary temporary electrical service and temporary wiring and outlets as required to meet project needs for temporary lighting and power at the start of the project, as work progresses and until acceptance by the Owner, excluding power to individual contractor's trailers.
- B. Extend temporary service from existing building service. Size system to adequately service project.
- C. Electrical work for construction purposes shall conform to Federal, State and local safety requirements, as well as requirements of the National Electrical Code. Obtain and pay for required applications, permits and inspections pertaining to this work.
- D. Provide all lamps required to service the project. Replace lamps and fuses throughout the life of the project.
- E. Pay all costs for installation, maintenance, supervision and removal of temporary light and power systems.

1.10 CONSTRUCTION AIDS

- A. Shoring and Bracing: Provide all shoring and bracing required for safety and proper execution of their work. Remove these items when the work is completed.
- B. Temporary Partitions: Provide temporary dustproof, security partitions in corridors, door openings and wall openings separating new work from existing building. Construction methods and materials shall be approved by Architect prior to construction of partition. However, construction shall be similar to plywood sheathing over wood studs with 6 mil plastic film applied over sheathing sealing all joints. Seal partitions at floor, walls and ceilings.
 - 1. Provide doors through temporary partitions with self closing devices and locks.

1.11 WEATHER PROTECTION

- A. Protect work and existing or adjacent property against weather, to maintain work, materials, apparatus and fixtures free from injury or damage during the entire construction period. Work likely to be damaged shall be covered or protected at the end of each day's work. Any work damaged by failure to provide protection required, shall be removed and replaced with new work at the Contractor's expense.
- B. Remove all snow and ice as may be required for proper protection and execution of the work and protection and safety of the public.
- C. Provide winter weather closures and temporary doors at all unclosed openings.

1.12 WATCHMAN SERVICE

- A. If Contractor considers watchman services necessary or desirable for protection of his/her own interest, such services may be employed at his/her own complete expense.

1.13 SAFETY

- A. Safety requirements shall be in accordance with the General Conditions.
- B. Provide and maintain guard lights at all barricades, railings, obstructions in the roadways or sidewalks and at all trenches or pits adjacent to walks or roadways.
- C. Strict attention and full adherence must be given the Williams-Steiger Occupational Safety and Health Act of 1970, U.S. Department of Labor.

1.14 SECURITY CONDITIONS

- A. Security of building must be maintained during "non-standard" working hours (premium time). This includes, but is not necessarily limited to, verifying all entrance doors and windows are secured.
- B. Contractor shall be responsible for all infractions of rules and regulations by his workers.
- C. Loitering or wandering through the corridors and into rooms not connected with the project or into other buildings on site will not be permitted.

1.15 DUST CONTROL

- A. Control dust originating within project limits using water or a dust palliative acceptable to the Architect. When conditions create blowing dust and dirt that is considered higher than that normally encountered, Contractor shall cooperate with Architect in determining methods to help minimize blowing. This may involve, as a minimum, more frequent applications of dust palliative. Calcium chloride may not be used.

1.16 TEMPORARY SIGNS

- A. Temporary Project Sign: Not required.
- B. Temporary Directional Signs: Provide as required to adequately direct traffic and personnel on site.

1.17 STREETS AND TRAFFIC

- A. Cleaning and Repair
 - 1. Contractors shall remove mud and spillage from public walks, streets and sewers without delay. Failure to clean areas promptly will result in areas being cleaned by the Owner at the responsible Contractor's expense.
 - 2. Damage to roads or other facilities on the grounds, resulting from hauling, storage of materials, or other activities in connection with the work shall be repaired or replaced, at no expense to the Owner, by the Contractor causing the damage. Repairs or replacements shall be made to the satisfaction of the Architect.

1.18 PARKING

- A. Employees of Contractors and subcontractors must park vehicles in areas assigned to them. Parking on streets or in restricted areas is prohibited.

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Requirements of this Section apply to the Work of all other Sections.
- B. Section Includes:
 - 1. Transportation and Handling.
 - 2. Storage and Protection.
 - 3. Standards.
 - 4. Manufacturers and Types.
 - 5. Fabrications.
 - 6. Shop Priming.
 - 7. Prohibited Materials and Methods.

1.02 RELATED SECTIONS

- A. Quality Control: Section 01 45 00.
- B. Cutting and Patching: Section 01 73 29.
- C. Shop Drawings, Product Data and Samples: Section 01 33 23.
- D. Execution Requirements: Section 01 73 00.

1.03 STANDARDS

- A. Standards, codes and regulations published by Manufacturer's Associations, governmental agencies and other regulatory authorities form a part of these Specifications as minimum requirements. Such references include the latest issue and all amendments up to 30 days prior to the Bid Date.
- B. "Governing Authority" means all federal, state and local laws and regulations.
- C. Where differences occur between the Contract Documents and such standards, the most restrictive requirement shall apply.
- D. Supply all materials and perform all work in accordance with the Manufacturer's Specifications and installation procedures, and in conformance with published trade and manufacturer's association standards, unless specifically noted otherwise herein.

1.04 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accordance with construction schedules and installation, coordinate to avoid conflict with work and conditions at the site.
 - 1. Transport products by methods to avoid product damage.
 - 2. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
 - 3. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and accepted submittals, and that products are properly protected and undamaged.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage.

1.05 STORAGE AND PROTECTION

- A. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.
- B. Store products in accordance with manufacturer's instructions with seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weathertight enclosures.
 - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
 - 3. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
- C. Exterior Storage
 - 1. Store fabricated products above the ground, on blocking or skids, to prevent soiling or staining. Cover products which are subject to deterioration with impervious coverings. Provide adequate ventilation to avoid condensation.
 - 2. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign materials.
 - 3. Store foam plastic away from exposure to sunlight, except to extent necessary for period of installation and concealment.
- D. Arrange storage in a manner to provide access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage.
- E. Protection After Installation: Provide coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove when no longer needed.

PART 2 PRODUCTS

2.01 GENERAL PRODUCT REQUIREMENTS

- A. Products include materials, equipment and systems.
- B. Products incorporated into the work:
 - 1. Comply with specifications and referenced standards as minimum requirements.
 - 2. Undamaged.
 - 2. Manufactured and fabricated products:
 - a. Design, fabricate and assemble in accordance with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gages, to be interchangeable.
 - c. Two or more items of the same kind shall be identical, by the same manufacturer.
 - d. Products shall be suitable for service conditions.
 - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing by the Architect.
 - 4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.
 - 5. New and unused at time of installation, except as otherwise indicated.
 - 6. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 7. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.

2.02 MANUFACTURER AND PRODUCT SELECTION PROCEDURES

- A. Specified Product: Where specifications name a single manufacturer and product or refer to a single manufacturer and product indicated on the drawings, provide the named product. Comparable products or substitutions for Contractor's convenience will not be considered.
- B. Specified Manufacturer: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
- C. Multiple Specified Products: Where more than one manufacturer and specific product is listed, provide one of the products named. No substitutions will be

permitted after signing the contract. Comparable products or substitutions for Contractor's convenience will not be considered

- D. Multiple Manufacturers: Where specifications include a list of manufacturers names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
- E. Basis of Design: Where specifications name a Basis of Design or refer to a Basis of Design product indicated on the drawings, the design is based on the product listed. Subject to compliance with requirements, provide the specified product or a product manufactured by one of the other manufacturers listed.
 - 1. The characteristics of the Basis-of-Design Product establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.
 - 2. Equipment or materials from these manufacturers will be acceptable contingent upon their meeting the design, appearance and functional standards established by the specified items. If equipment or a material of an acceptable manufacturer requires changes; electrically, mechanically, structurally, from what is indicated on the drawings, it shall be the responsibility of the Contractor requiring such change, to pay all costs involved with no additional costs to the Owner.
 - 3. Submit evaluations as follows:
 - a. Submit proposed comparable products for evaluation by the Architect at least two weeks prior to awarding contract to the manufacturer of a comparable product.
 - b. Obtain samples of Basis-of-Design product.
 - c. Select comparable products that comply with the characteristics specified. Submit evidence demonstrating compliance.
 - d. Submit samples of comparable products displayed side-by-side with samples of Basis-of-Design products. Architect will determine whether the proposed comparable product is acceptable. Architect is not obligated to prove non-equivalence of proposed comparable products.
- F. Where a performance is specified and no manufacturer is listed, submit through the Shop Drawing procedure the name of the manufacturer, the product proposed, and detailed information showing its characteristics. Such proposal shall meet or exceed the specification, line item by line item, or be rejected.
- G. Equivalent components (articles, devices, materials, forms of construction, fixtures, etc.) may be submitted to the Architect for approval prior to bidding regardless of listed manufacturers.
- H. Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with

requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.03 FABRICATION

- A. Fabricate all items in the shop insofar as practicable. Where items cannot be completely shop fabricated and assembled for shipment, assemble and fit in shop, disassemble and ship. Identify parts for field assembly.
- B. Fabricate items to be straight, square, in proper alignment, and with hairline joints where joints are necessary and permitted. Pre-plan field joints to be as inconspicuous as possible; coordinate locations with Architect.

2.04 SHOP PRIMING

- A. Shop prime or seal surfaces of all products to receive paint materials in accordance with the requirements of Section 09 91 00.
- B. Apply a primer or sealer compatible with the specified paint materials.
- C. In the event such a primer is determined to be incompatible with the specified finish paint system, provide a barrier coat or remove the primer and reprime as directed, at no additional cost to the Owner.

2.05 PROHIBITED MATERIALS AND METHODS

- A. The following items are expressly prohibited:
 - 1. Attachment Related Items
 - a. Powder Fasteners: Powder fasteners are defined as anchors which are driven into place by any device which produces an impact force by use of a powder charge, compressed air, gas or any other propellant. Powder fasteners prohibited for the following conditions:
 - 1) Attachment of structural members.
 - 2) Where public may be endangered by misuse.
 - b. Plug anchorage by use of wood, lead or plastic.

PART 3 EXECUTION

Not Applicable

END OF SECTION

SECTION 01 73 00

EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Requirements of this Section apply to the Work of all other Sections.
- B. Section Includes:
 - 1. Examination of Substrate.
 - 2. Preparation.
 - 3. Installation.
 - 4. Workmanship.
 - 5. Protection.
 - 6. Prohibited Methods.

1.02 WORK SPECIFIED IN OTHER SECTIONS

- A. Quality Control: Section 01 45 00.
- B. Cutting and Patching: Section 01 73 29.
- C. Shop Drawings, Product Data and Samples: Section 01 33 23.
- D. Product Requirements: Section 01 60 00.

1.03 STANDARDS

- A. Standards, codes and regulations published by Manufacturer's Associations, governmental agencies and other regulatory authorities form a part of these Specifications as minimum requirements. Such references include the latest issue and all amendments up to 30 days prior to the Bid Date.
- B. "Governing Authority" means all federal, state and local laws and regulations.
- C. Where differences occur between the Contract Documents and such standards, the most restrictive requirement shall apply.
- D. Supply all materials and perform all work in accordance with the Manufacturer's Specifications and installation procedures, and in conformance with published trade and manufacturer's association standards, unless specifically noted otherwise herein.

1.04 NON-CONFORMING WORK

- A. Faulty work or work not in conformance with the Contract Documents will not be permitted by the Architect.
 - 1. It is the responsibility of the Contractor to propose a remedy by means of detailed drawings and written documentation and submit such documentation to the Architect for comments.
 - 2. All costs for the removal and reconstruction of such work, as well as additional services of the Architect, shall be paid for by the Contractor.

PART 2 PRODUCTS - NOT APPLICABLE

PART 3 EXECUTION

3.01 EXAMINATION OF SUBSTRATE

- A. Examine the substrates or structure to which a product is to be applied or installed. Do not proceed until unsatisfactory conditions have been corrected. Starting the work indicates acceptance of conditions and the installer assumes full responsibility for results.
- B. Check the substrate or structure for proper tolerances and clearances. Tolerances are listed under individual specification Sections.

3.02 PREPARATION

- A. Substrate: Where the products are applied to a substrate, prepare the substrate as recommended by the product manufacturer. That generally includes the following:
 - 1. Bringing substrate to a uniform surface by smoothing uneven surfaces and filling holes, cracks and depressions with recommended filler or compatible type material.
 - 2. Remove substances such as dust, oils and other foreign matter, not compatible with the product.
 - 3. Surfaces shall be dry, unless moisture content or wetting requirement is specified or recommended.
- B. Dimensions
 - 1. If the exact location of an item is not indicated by dimension on the Drawings or noted in the Specifications, the Architect reserves the right to determine such location in the field prior to roughing-in.
 - 2. If the exact dimensions of a product are not indicated, the Architect reserves the right to determine dimensions prior to the ordering or fabrication of a product.
 - 3. Such dimensional changes shall not be a basis for changes in the Contract Sum.

3.03 INSTALLATION

- A. Install products in accordance with manufacturer's recommendations or the requirements of trade associations, listed standards, Shop Drawings and Contract Documents.
- B. If a conflict exists between these references, the most strict requirements govern. If printed instructions are not available, consult with the manufacturer or the manufacturer's field representative, where applicable.
- C. Install work that will not interfere with the proper installation of the Work of other trades.
- D. Install work in a manner to facilitate operating, servicing and repairing.
- E. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
- F. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

3.04 WORKMANSHIP

- A. Install products straight, plumb, level and in line. Securely attach items to the substrate, using recommended adhesives, mechanical fasteners or other devices. Where holes are provided for attachment, do not field drill or cut new holes without the approval of the Architect.
- B. Where applicable, match finished work to the approved samples, mock-ups or referenced existing materials/construction.
- C. Conceal fasteners wherever possible, unless exposed fasteners are permitted or specified.
- D. Weld in accordance with AWS standards; comply with AWS for qualifications of operators and for workmanship.
- E. Visual Effects: Provide uniform joint widths in exposed work. Arrange joints in exposed work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.
- F. Recheck measurements and dimensions, before starting each installation.

3.05 PROTECTION

- A. Protect finished surfaces of product being installed and surrounding products from damage during installation. Provide protective devices as required and as recommended by the manufacturer. Cover work subject to damage at the end of each day's work.
- B. Coat concealed surfaces of metal products with a bituminous or other approved coating to prevent contact between dissimilar metals or other material which can cause deterioration.
- C. Correct damage by repairing or replacing as directed by the Architect. Repairing will be permitted only where the repair is undetectable and does not cause structural damage or interfere with proper functioning of the part.
- D. Protect finish of installed products until Substantial Completion of the Project by use of wrappings, covers or other approved protective devices. Remove such protection immediately prior to final cleaning.
- E. Limiting Exposures: Coordinate and supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Maintain exposures within the manufacturers recommended limits.
- F. Take precautions to protect existing concrete and asphalt pavement from damage due to vehicle loads, parking, and storage.
 - 1. Schedule loading to minimize pavement material consolidation during hot weather. Distribute wheel loads to the greatest extent possible.

END OF SECTION

SECTION 01 73 29

CUTTING AND PATCHING

PART 1 GENERAL

1.01 DESCRIPTION

- A. Execute cutting, fitting or patching of Work, required to:
 - 1. Make several parts fit properly.
 - 2. Uncover Work to provide for installation of ill-timed Work.
 - 3. Remove and replace defective Work.
 - 4. Remove and replace Work not conforming to requirements of Contract Documents.
 - 5. Remove samples of installed Work as specified for testing.
 - 6. Install specified Work in existing construction.

- B. In addition to contract requirements, upon written instructions of Architect:
 - 1. Uncover Work to provide for Architect's observation of covered Work.
 - 2. Remove samples of installed materials for testing.
 - 3. Remove Work to provide for alteration of existing Work.

- C. All cutting and patching shall be done by craftsmen skilled in type of work involved.

- D. Do not endanger any Work by cutting or altering Work or any part of it.

1.02 SUBMITTALS

- A. Prior to cutting which affects structural safety of Project, submit written notice to Architect, requesting consent to proceed with cutting, including:
 - 1. Identification of Project.
 - 2. Description of Affected Work.
 - 3. Necessity for cutting.
 - 4. Affect on other Work, on structural integrity of Project.
 - 5. Description of proposed Work. Designate:
 - a. Scope of cutting and patching.
 - b. Contractor and trades to execute work.
 - c. Products proposed to be used.
 - d. Extent of refinishing.
 - 6. Alternative to cutting and patching.

- B. Should conditions of Work, or schedule indicate change of materials or methods, submit written recommendation to Architect, including:
 - 1. Conditions indicating change.

2. Recommendations for alternative materials or methods.
 3. Submittals as required for Substitutions.
- C. Submit written notice to Architect, designating time Work will be uncovered, to provide observation.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Patching of materials and surfaces shall be in accordance with the requirements of the Contract Documents. Where not otherwise defined, patching shall match adjacent surfaces and proper materials shall be provided accordingly.

PART 3 EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions of Work, including elements subject to movement or damage during cutting and patching.
- B. After uncovering Work, inspect conditions affecting installation of new products.

3.02 PREPARATION PRIOR TO CUTTING

- A. Provide shoring, bracing and support as required to maintain structural integrity of Project.
- B. Provide protection for other portions of the Project, including all Contractors' personnel.

3.03 PERFORMANCE

- A. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerances, finishes.
- B. Execute cutting and demolition by method which will prevent damage to other Work, and will provide surface to receive installation of repairs and new Work.
1. No cutting shall be performed which will, in any way, reduce the structural strength of the building. Should such cutting be necessary, consult Architect and do not proceed with such operation unless written approval is given.
 2. Finished Surfaces: Cur or drill from the exposed or finished side into concealed surfaces.
 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
- C. Restore Work which has been cut or removed; install new products to provide completed Work in accord with requirements of Contract Documents.

- D. Patching of materials and surfaces shall be in accordance with the requirements of the Contract Documents. Where not otherwise defined, patching shall match existing or adjacent surfaces and proper materials shall be provided accordingly.
1. Wherever existing walls, floors, ceilings, etc., are cut, the exposed surfaces must be neatly finished by patching, painting, wall covering, etc., as required to blend patched areas into adjacent existing surfaces. Patched areas shall not be visible when viewing entire wall surface.
 2. Where painting or finishing of patched surfaces or application of wall or floor covering is required, finish the entire plane of surface in which patched area occurs.

END OF SECTION

SECTION 01 74 00

CLEANING

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Execute cleaning, during progress of the work and at completion of the work (final cleaning), as required by Contract Documents.

1.02 RELATED SECTIONS

- A. Cutting and Patching: Section 01 73 29.
- B. Cleaning for Specific Products or Work: Specification section for the work.

1.03 CLEANING AND DISPOSAL REQUIREMENTS

- A. Standards: Maintain project in accord with the following safety and insurance standards:
 - 1. Applicable Federal and State Requirements.
 - 2. National Fire Protection Association.
- B. Hazards Control: Comply with the following requirements:
 - 1. Store volatile wastes in covered metal containers, and remove from premises daily.
 - 2. Prevent accumulation of wastes which create hazardous conditions.
 - 3. Provide adequate ventilation during use of volatile or noxious substances.
- C. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on project site.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary sewers.
 - 3. Do not dispose of waste into streams or waterways.
 - 4. Wet down dry materials and rubbish to prevent dust.
- D. Clean streets, highways, and private properties of all mud, earth, rubbish, rocks, refuse or other debris of any kind resulting from such work or related transportation to and from the work site.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Select and use cleaning materials and equipment with care to avoid scratching, marring, defacing, staining or discoloring surfaces cleaned.
- B. Use only cleaning materials recommended by manufacturer of surfaces to be cleaned.
- C. Use cleaning materials only on surfaces recommended by the cleaning material manufacturer.

PART 3 EXECUTION

3.01 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
- B. Provide, maintain and empty 55 gallon metal and dumpster type containers for collection of waste materials, debris and rubbish. Locate containers as directed by Architect.
 - 1. Provide containers with adequate capacity to accommodate anticipated needs. If containers do not have adequate capacity, increase intervals of waste removal or capacity of containers until adequate capacity is provided.
- C. At reasonable intervals during progress of Work, but in no case less than once a week, dispose of waste materials, debris and rubbish.
- D. Site: Maintain Project site free of waste materials and debris.
- E. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- F. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- G. Direct Special Attention To:

1. Provide non-staining layout lines and other markings on stone and concrete. Use chalk lines wherever possible and remove when no longer needed.
 2. Remove all stains from concrete surfaces, including floors.
 3. Shop marks shall not appear on exposed surfaces of any item.
 4. Remove concrete, mortar and paint spatters.
 5. Protect aluminum frames during construction and thoroughly clean upon completion of the installation.
- H. Clean interior surfaces before start of finish painting and continue cleaning on an as-needed basis until painting is finished.
- I. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.
- J. Handle materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.
- K. Vacuum interior building areas where work is performed prior to painting and other finish work. Continue vacuum cleaning on an as needed basis until building is ready for occupancy.
- L. Protect interior of ductwork during construction from accumulation of dirt, dust or debris.
- M. Clean trash from all chases and concealed spaces before final enclosure.

3.02 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
1. Leave Project clean and ready for occupancy.
- B. Employ experienced workmen, or professional cleaners for final cleaning.
- C. At the completion of the work, remove all surplus material, false work, temporary structures, including foundations thereof, plants of any description and debris of every nature resulting from their operations and put the site in a neat and orderly condition.
- D. Clean exposed interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition.
- E. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.

- F. Sweep concrete floors broom clean.
- G. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
- H. Remove grease, dust, dirt, stains, labels, fingerprints and other foreign materials from sight-exposed interior and exterior surfaces, including light fixtures and lenses; polish surfaces so designated to a shine finish.
 - 1. Clean finishes free of dust, stains, films and other foreign substances.
 - 2. Clean transparent and glossy materials to a polished condition; remove foreign substances. Polish reflective surfaces to a clear shine.
- I. Remove temporary protection and labels not required to remain
- J. Repair, patch and touch-up marred surfaces to specified finish, to match adjacent surfaces.
- K. In preparation for substantial completion or occupancy, conduct final inspection of sight-exposed interior and exterior surfaces, and of concealed spaces.
- L. Clean light fixtures and lamps; polish lenses.
- M. Site/Exterior Items: Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - 1. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - 2. Rake grounds that are neither planted nor paved to a smooth, even textured surface.
 - 3. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - 4. Clean exposed hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces.
- N. Maintain cleaning until Final Completion.
- O. Prior to Final Completion, or Owner occupancy, Contractor shall conduct an inspection of sight exposed interior and exterior surfaces, and all work areas, to verify that the entire work is clean.

END OF SECTION

SECTION 01 77 00
PROJECT CLOSEOUT

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Comply with requirements stated in Conditions of the Contract and in Specifications for administrative procedures in closing out the work.
- B. Related Requirements
 - 1. Fiscal Provisions, Legal Submittals and Additional Administrative Requirements: Conditions of the Contract.
 - 2. Operating and Maintenance Data: The respective specification sections.
 - 3. Warranties and Bonds: The respective specification sections.
 - 4. Close-out Submittals: The respective specification sections.

1.02 SUBSTANTIAL COMPLETION

- A. When Contractor considers the work to be substantially complete, he shall submit to the Architect:
 - 1. A written notice that the work, or designated portion thereof, is substantially complete.
 - 2. A list of items to be completed or corrected.
- B. Within a reasonable time after receipt of such notice, the Architect will make an inspection to determine the status of completion.
- C. Should the Architect determine that the work is not substantially complete:
 - 1. Architect will promptly notify the Contractor in writing, giving the reasons therefore.
 - 2. Contractor shall remedy the deficiencies in the work, and send a second written notice of substantial completion to the Architect.
 - 3. Architect will re-inspect the work.
- D. When the Architect concurs that the work is substantially complete, he will:
 - 1. Prepare a Certificate of Substantial Completion on AIA Form G 704, accompanied by Contractor's list of items to be completed or corrected as verified and amended by the Architect.
 - 2. Submit the Certificates to Owner and Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

1.03 FINAL INSPECTION

- A. When a Contractor considers the work is complete, he 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 inspection.
- B. Architect will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should Architect consider that the work is incomplete or defective:
 - 1. Architect 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 Architect that the work is complete.
 - 3. Architect will reinspect the work.
- D. When the Architect finds that the work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittals.

1.04 CLOSE-OUT SUBMITTALS

- A. Evidence of compliance with requirements of governing authorities:
 - 1. Certificate of Occupancy
 - 2. Certificates of Inspection
- B. Warranties and Bonds: To requirements of respective Specification Sections.
- C. Evidence of Payment and Release of Liens: To requirements of General and Special Conditions.
- D. Certificate of Insurance for Products and Completed Operations.

1.05 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to Architect.
- B. Statement shall reflect all adjustments to the Contract Sum:
 - 1. The original Contract sum.

2. Additions and Deductions Resulting From:
 - a. Previous Change Orders
 - b. Deductions for uncorrected work
 - c. Other adjustments
 3. Total Contract sum, as adjusted.
 4. Previous payments
 5. Sum remaining due
- C. Architect will prepare a final Change Order reflecting approved adjustments to the Contract Sum which were not previously made by Change Orders.

1.06 FINAL APPLICATION FOR PAYMENT

- A. Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

END OF SECTION

SECTION 02 41 19

SELECTIVE BUILDING DEMOLITION

PART 1 GENERAL

1.01 SUMMARY OF WORK

- A. Work Included: The extent of demolition work is indicated on drawings, and includes, but is not necessarily limited to, the following:
1. Selective breaking up, dismantling and/or removal of existing building items.
 2. Salvage of selected existing materials to be turned over to Owner as may be determined by the Owner or to be reused in the project.
 3. Cutting and patching.
 4. Clean up.

1.02 RELATED SECTIONS

- A. Cutting and Patching: Section 01 73 29.

1.03 PROJECT CONDITIONS

- A. Condition of Structures: The Owner assumes no responsibility for actual condition of structures to be demolished.
1. Conditions existing at time of inspection for bidding purposes will be maintained by Owner insofar as practicable. However, variations within the structure may occur by Owner's removal and salvage operations prior to the start of the Demolition work.
 2. It is solely the Contractor's responsibility to determine demolition procedure and sequence and to insure the safety of the building and its component parts during demolition. This includes the addition of whatever shoring, sheeting, temporary bracing, guys or tie-downs which might be necessary. Such material shall maintain the Contractor's property after completion of the project.
 3. It is solely the Contractor's responsibility to follow all applicable safety codes and regulations during all phases of the work.
 4. Existing Building: Provide temporary supports and other measures as required to prevent damage to the existing building during construction. Field verify all existing dimensions which affect the new construction.
- B. Title to Removed Property
1. All removal items, unless otherwise indicated for salvage or reuse will become the property of the Contractor and shall be removed from the Site.

During the demolition operations, Owner reserves the right to add to, or delete from, the list of items designated for reuse or salvage.

2. Items to be salvaged for the Owner or for reinstallation are as indicated on the drawings.
3. Site storage or sale of Contractor owned removed items will not be permitted.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

E. Traffic: Conduct demolition operations and removal of debris to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities.

F. Protections: Ensure safe passage of persons around area of demolition. Conduct operations to prevent injury to adjacent buildings, structures, other facilities, and persons.

G. Damages: Promptly repair damages caused to adjacent facilities by demolition operations at no cost to Owner.

H. Utility Services

1. Locate and identify electrical and mechanical services passing through or located within affected area and serving areas outside the work limits.
2. Maintain existing utilities and protect against damage during demolition operations.
3. Shut-down periods
 - a. Arrange timing of shut-down periods of all in-service utilities with the Owner. Do not shut down any utility without prior written approval.
 - b. Keep shut-down period to a minimum or use intermittent period as directed.
 - c. Some shut-down hours may be required after normal working hours. No extra compensation will be made for Work after normal working hours, weekends or holidays.

- I. Scheduling: Conduct work so as to avoid interference with operations and work in areas of building which are to remain in service.

PART 2 PRODUCTS

2.01 MATERIALS

- A. The Contractor shall furnish all materials, tools, equipment, supplies and labor required to perform the work in accordance with the Drawings and Specifications and within the time limits as specified. All work done under this contract shall conform to all current standards, building codes and ordinances. American National Standard for Demolition Operations – Safety Requirements, ANSI A10.6 (latest edition), is included by reference.
- B. Shoring Materials: As determined by Contractor.

PART 3 EXECUTION

3.01 PROTECTION

- A. Use water sprinkling, temporary enclosures and other approved methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level. Comply with governing regulations pertaining to environmental protection.
 - 1. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, pollution and electrical shock.
 - 2. Clean adjacent structures and improvements of dust, dirt and debris caused by demolition operations, as directed by the Architect. Return adjacent areas to conditions existing prior to the start of the work.
- B. In removal of existing materials, take care not to damage work remaining in place, salvageable materials or equipment. Repair or replace any existing construction, materials or equipment damaged during demolition to Owner's satisfaction at no additional cost.

3.02 DEMOLITION

- A. Building Items Demolition
 - 1. General
 - a. Items specified herein or indicated on drawings.
 - b. Where indicated to be removed and either turned over to Owner or reinstalled, use methods for removal which will provide the least potential adjacent materials to remain.
 - c. Miscellaneous Items: Material or equipment encountered during construction which must be removed to aid in construction operations or that which will not be used in completed facilities.

2. Concrete and Masonry: Where cut line will be exposed in the finished work and where physically feasible, make edges by saw cutting.
3. Masonry: Demolish in small sections. Use bracing and shoring where necessary to avoid collapse of structure.
4. Junction Points: Neatly repair the point of junction after removal of parts or all of masonry walls, slabs and like work which tie into new work or existing work, so as to leave only finished edges and surfaces exposed.
5. Except where Contract Documents require leaving an existing floor finish in place, completely remove existing flooring from locations where new finishes are scheduled. Leave top surface of substrate completely free from materials that would interfere with bond of new materials.
6. Floor Preparation: See Section 01 73 00, Execution Requirements.

B. Mechanical (HVAC & Plumbing)

1. Disconnect or shut off service to areas where mechanical work is to be removed.
2. Remove all plumbing, heating, ventilating and air conditioning equipment, fixtures and related piping, ductwork and appurtenances as indicated.

C. Electrical

1. Disconnect or shut off service to areas where electrical work is to be removed.
2. Remove all electrical fixtures, equipment and related switches, outlets, conduit, wiring and appurtenances as indicated, except conduit in walls and ceilings not being removed may remain. If these conduits are left in place, cut ends are to be permanently sealed.

3.03 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Remove from site, debris, rubbish and other materials resulting from demolition operations.

B. Removal: Transport materials removed and dispose of off site except as follows:

1. Transport material indicated to be "salvaged" to storage areas as directed by Architect. Storage areas are located on-site.
2. Store salvaged materials, protected from dirt and damage.

C. Clean Up

1. Leave interior areas "broom clean".
2. Remove barricades as directed.
3. Remove shoring.

END OF SECTION

SECTION 06 10 50

WOOD BLOCKING

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Concealed blocking for support of accessories, equipment, specialty items, cabinets, fixtures, trim, facing materials and similar type items.

1.02 REFERENCES

A. Standards

1. American Wood Protection Association (AWPA): Treatment Standards.
 - a. AWPA U1 - Use Category System: User Specification for Treated Wood
2. American Society for Testing and Materials (ASTM)
 - a. A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

1.03 SUBMITTALS

- A. Preservative Treated Wood: Submit certification by treating plant stating chemical and process used, net amount of salts retained, (if applicable) and conformance with standards.

1.04 QUALITY ASSURANCE

- A. Softwood Lumber: Grading rules and wood species shall conform with the voluntary Product Standards PS 20 including grading rules of the following associations, as applicable:

1. Southern Pine: Standard Grading Rules for Southern Pine Lumber, published by Southern Pine Inspection Bureau (SPIB).
2. Douglas Fir, Western Larch and Hemlock: Western Lumber Grading Rules, published by Western Wood Products Association (WWPA), or Standard Grading and Dressing Rules for West Coast Lumber Inspection Bureau (WCLIB).
3. Western Spruce, Pine and Fir: Western Spruce-Pine-Fir Association (WSPFA) and current Canadian Grading Rules by National Grades Association, Canada.

B. Grade Marks

1. General: Identify all lumber and plywood by official grade mark.

2. Lumber: Grade stamp to contain symbol of grading agency, mill number or name, grade of lumber, species or species grouping, or combination designation, rules under which graded, where applicable and condition of seasoning at time of manufacture.

1.05 STORAGE AND HANDLING

- A. Store off the ground.
- B. Protect from direct contact with the weather.
- C. Provide proper ventilation.

PART 2 PRODUCTS

2.01 SOFTWOOD LUMBER

- A. Species: Any commercial softwood.
- B. Moisture Content: Maximum 19% at time of manufacture.
- C. Dimensions
 1. Specified lumber dimensions are nominal unless otherwise indicated.
 2. Actual dimensions conform to industry standards established by the American Lumber Standards Committee and the rules writing agencies.
- D. Surfaces: Surface four sides (S4S) unless specified otherwise.
- E. Grading: Construction grade.

2.02 PRESERVATIVE WOOD TREATMENT

- A. Preservative Treatment by Pressure Process: AWPB U1; Use Category UC2
 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark each piece of treated lumber with AWPB Quality Mark designation denoting conformance to the appropriate specification.
 1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece.
- D. Application: Treat items indicated on Drawings, and the following:

1. Wood blocking and similar concealed members in contact with masonry or concrete.

2.04 ROUGH HARDWARE

- A. General: Provide all necessary spikes, screws, nails, bolts and other hardware for satisfactory erection of work. Except where noted to be stainless steel, provide hot-dipped galvanized finish for hardware exposed to exterior, located in toilet rooms, in contact with treated wood or in contact with roofing or flashing.
1. Nails: Common wire nails, except where noted otherwise on drawings; sizes as noted or specified herein.
 2. Attachment to Concrete or Masonry: Metal expansion type shields or inserts; sizes as required to accommodate applied fastener; spacing as indicated on drawings.
 - a. "DH" or "Ankr-Tight" by WEJ-IT or equal by RED HEAD or HILTI.
 - b. Sleeve type for masonry.
 - c. Wedge type for concrete.
 3. Adhesive Type Anchor Bolts – In Hollow CMU: Chemically grouted adhesive anchor systems with nylon or stainless steel screen inserts. Use 1/2 inch diameter anchors, unless otherwise noted.
 - a. HIT HY20 Adhesive Anchors, HILTI, INC.
 - b. EPCON System, ITW/RAMSET/RED HEAD
 - c. Chem-Stud Adhesive Anchors, RAWLPLUG COMPANY, INC.
 - d. Simpson Set Epoxy- Tie Adhesive Anchors, SIMPSON STRONG-TIE COMPANY, INC.
 4. Adhesive Type Anchor Bolts - In solid grouted CMU and Concrete: Chemically grouted adhesive anchor systems. Use 3/4 inch diameter anchors, unless otherwise noted.
 - a. HIT HY150 Adhesive Anchors, HILTI, INC.
 - b. EPCON System, ITW/RAMSET/REDHEAD
 - c. Chem-Stud Adhesive Anchors, POWERS FASTENERS, INC.
 - d. Simpson Set Epoxy-Tie Adhesive Anchors, SIMPSON STRONG-TIE COMPANY, INC.
 5. Attachment to Steel Studs: Self tapping screws of sufficient length and strength to perform the functions for which they are used.

2.05 ADHESIVE

- A. Adhesives: Water- and mold-resistant formulation complying with ASTM D3498 that is approved for use indicated by adhesive manufacturer.

PART 3 EXECUTION

3.01 CONDITIONS OF SURFACES

- A. General: Verify that surfaces to receive blocking are prepared to exact grades and dimensions.

3.02 INSTALLATION

- A. Align and anchor blocking with countersunk bolts, washers, nuts, or nails, as applicable.
- B. Locate blocking to facilitate installation of finishing materials, fixtures, specialty items and trim.

3.03 WOOD TREATMENT

- A. Preservative Treated Wood Products: Provide pressure treatment for all lumber and plywood as specified hereinbefore.

3.04 CLEAN UP

- A. Clean up debris and cuttings on a regular daily basis. Remove and dispose of excess materials and debris created by wood blocking.
- B. Maintain the building and site free of accumulations of cutting and waste materials in a neat orderly condition acceptable to the Architect.

3.05 WASTE MANAGEMENT

- A. Do not burn scraps of treated wood. Do not mix treated wood scraps with untreated wood. Hazardous wastes shall be separated, stored, and disposed of according to local regulations.

END OF SECTION

SECTION 06 20 00

CARPENTRY AND MILLWORK

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide millwork and carpentry as indicated. Work includes:
 - 1. Bench
 - 2. Radiator cover.
 - 3. Miscellaneous fasteners and hardware.

1.02 RELATED SECTIONS

- A. Wood Blocking: Section 06 10 50
- B. Plastic Laminate Casework: Section 12 33 55.
- C. Plastic Fabrication Systems (Sliding Panel): Section 06 60 10.

1.03 REFERENCES

- A. Standards: Wherever the following abbreviations are used herein, they shall refer to the corresponding standard:
 - 1. ANSI: American National Standards Institute.
 - 2. AWI: Architectural Woodwork Institute.
 - 3. NEMA: National Electrical Manufacturer's Association.
 - 4. P.S.: U.S. Product Standard.

1.04 SUBMITTALS

- A. Submit manufacturer's product data for scheduled laminated plastic and accessory materials.
- B. Submit shop drawings for countertops and casework.
 - 1. Provide large scale details.
 - 2. Indicate methods of fabrication, edging, location and construction of joints.
- C. Submit samples of all finish materials.
- E. Manufacturer's product data describing type and quality of all items.

1.05 QUALITY ASSURANCE

- A. Fabricator qualifications: A firm specializing in the fabrication of millwork with a minimum of 5 years experience and a satisfactory record of performance on projects of comparable size and quality. Fabricator shall be acceptable to the Architect.
- B. Installation: Performed only by skilled finish carpenters with a minimum of 3 years experience in installing custom millwork similar to that required for this project.
- C. All solid surface material type work shall be performed by a Manufacturer Certified fabricator.
- D. Provide lumber factory marked with type, grade, mill and grading agency identification on concealed surfaces. Omit marking and submit mill certificates for materials to receive transparent finishes that cannot be marked on a concealed surface.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Protect woodwork materials and items during delivery, storage and handling to prevent damage, soiling and deterioration.
- B. Do not deliver woodwork materials and items until concrete, masonry, painting, grinding and other similar wet work has been completed and is thoroughly dry, outside door openings are permanently watertight, exterior windows are glazed and, in case of temperature dropping below 60° F., until temporary heating and ventilating systems are in operation.
- C. Store materials in dry, well-ventilated spaces with constant minimum temperature of 60° F., and maximum relative humidity of 55%.
 - 1. Do not store adhesives with materials that have a high capacity to absorb VOC emissions (i.e., materials which are woven, fibrous or porous in nature, such as acoustical ceilings, carpets, textiles, etc.).
 - 2. Do not store adhesives in occupied spaces.

1.07 PROJECT CONDITIONS

- A. Provide and maintain a constant temperature and humidity before, during and after installation as required to maintain optimum moisture content of installed materials.
- B. Obtain measurements and verify dimensions and details before proceeding with architectural woodwork.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Lumber

1. Provide lumber surfaced four sides (S4S) and worked to profiles and patterns shown. Nominal sizes are as shown, except where detailed dimensions are indicated.
 2. Moisture Content: Provide materials kiln-dried to maximum moisture content of 6% complying with AWI Standards, Section 100-G-3.
 3. Softwood Lumber: Comply with PS-20, "American Softwood Lumber Standard," and with applicable rules of grading and inspection agency for species indicated.
 - a. Western Red Cedar, Ponderosa Pine, White Pine: Western Lumber Grading Rules, published by Western Wood Products Association (WWPA), or Standard Grading Rules for West Coast Lumber, No. 16, published by West Coast Lumber Inspection Bureau (WCLIB).
 4. Species: Fabricator's option.
- B. Softwood Plywood: Thickness as indicated. Formaldehyde free.
1. Concealed Use: APA-BB-EXPOSURE I, with exterior glue.
 2. Comply with PS-1, "Construction and Industrial Plywood".
- C. Medium Density Fiberboard (MDF): Thickness as specified unless otherwise indicated on Drawings. Maximum moisture content of 8%. Meet the following minimum standards:
1. Internal Bond: 90 psi.
 2. Modulus of Rupture: 2,500 psi.
 3. Screw Holding Power: 325 pounds.
 4. Density: Minimum 40 pounds per cubic foot.
 5. Fire Rating: ASTM E84 Class A
 - a. Smoke Developed: 95
 - b. Flame Spread: 15
- D. Nails
1. Provide steel nails with diamond point for soft woods and blunt point for hardwoods.
 2. Interior Work - Finishing Nails: 6d for 3/4" material; 9d or 10d for 5/4" material; and 12d for 1-1/2" material.
- E. Adhesive: Low-VOC, FS MMM-A-125C, Type II, water- and mold-resistant.
- F. Solid Surface Material
1. Manufacturer
 - a. Basis of Design: Corian by DU PONT
 - b. Other Manufacturers: Solid surface material by other manufacturers is acceptable provided the material is a pattern and color match with the Basis of Design as approved by the Architect during bidding. Approved material will be included by Addendum.

2. Color: CORIAN Concrete.
3. Thickness: As indicated.
4. Surface burning characteristics in accordance with ASTM E 84: Class I or A, and as follows:
 - a. Flame spread: <25.
 - b. Smoke developed: <25.
5. Joints: Provide watertight, fused joints as recommended by manufacturer.
6. Edge Treatment: As detailed on drawings. Ease all exposed edges not otherwise detailed.

G. Other Materials: As indicated on the drawings.

2.02 FABRICATION

- A. General: Except as specified hereinafter, fabricate all work in accordance with AWI quality standards as specified. Work not specified with a level of quality shall be not less than "Custom" quality per AWI.
- B. Custom Millwork and Casework Items: As indicated on the drawings.
 1. Solid Surface Materials: Fabricate to profiles, sizes and edge conditions indicated on drawings.

PART 3 EXECUTION

3.01 PREPARATION

- A. Condition woodwork materials, items and products to average prevailing humidity conditions in installation areas before installing.
- B. Install blocking and anchoring devices built into substrates for anchorage of all items.
- C. Deliver inserts and anchoring devices to be built into substrates well in advance of time substrates are to be built.

3.02 INSTALLATION

- A. Quality: Comply with AWI Section 1700.
- B. Install woodwork materials and products plumb, level, true and straight with no distortion. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8'-0" for plumb and level and with 1/16" maximum offset in flush adjoining surfaces, 1/8" maximum offsets in revealed adjoining surfaces.
- C. Scribe and cut work to fit adjoining work and refinish cut surfaces or repair damaged finish at cuts.

3.03 CLEANING AND PROTECTION

- A. Repair damaged and defective work to eliminate functional and visual defects. Where not possible to repair properly, replace millwork as directed by the Architect.
- B. Protect installed work during remaining construction operations.
- C. Cover completed work with 4-mil polyethylene film protective enclosure, applied in a manner that will allow easy removal and without damage to woodwork or adjoining work. Remove cover immediately before the time of final acceptance.

END OF SECTION

SECTION 06 60 10

PLASTIC FABRICATION SYSTEMS

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide systems with plastic fabricated translucent panels as shown and specified. Work includes:
1. Aluminum framed sliding panel, fixed panels and hardware.
 2. Anchors, fasteners and accessories to complete the work.

1.02 QUALITY ASSURANCE

- A. Materials and systems shall be manufactured by a company continuously and regularly employed in the manufacture of specified materials for a period of at least five (5) consecutive years and which can show evidence of those materials being satisfactorily used on at least six (6) projects of similar size, scope and location. At least three (3) of the projects shall have been successful for use five (5) years or longer.
- B. Manufacturer must have documented training and qualification program for fabrication and installation of plastic fabrications.

1.03 SUBMITTALS

- A. General: Submit the following in accordance with conditions of contract and Section 01 33 23.
- B. Product Data: Submit manufacturer's product data; include product description, fabrication information, and compliance with specified performance requirements.
- C. Submit product test reports from an independent 3rd party testing agency indicating each type and class of panel system complies with the project performance requirements, based on comprehensive testing of current products. Previously completed test reports will be acceptable if for current manufacturer and indicative of products used on this project.
1. Rate of Burning (ASTM D 635)
 2. Self-Ignition Temperature (ASTM D 1929)
 3. Density of Smoke (ASTM D 2843)
 4. Flame spread and Smoke developed testing (ASTM E 84)
 5. Room Corner Burn Test (NFPA 286)
 6. Extent of Burning (UL 94)
 7. Impact strength (ASTM D 3763)

- 8. Safety glazing impact resistance (ANSI Z97.1-2004)
 - 9. UPIIT Test for Combustion Product Toxicity
 - 10. Dynamic environmental testing (ASTM standards D 5116 and D 6670)
- D. Shop Drawings: Include plans, elevations, sections, panel dimensions, details, and attachments to other work.
 - E. Samples for Initial Selection
 - 1. Submit minimum 2-inch by 2-inch samples. Indicate full color, texture and pattern variation.
 - F. Samples for Verification
 - 1. Submit minimum 4-inch by 4-inch sample for each type, texture, pattern and color of solid plastic fabrication.
 - G. Maintenance Data: Submit manufacturer's care and maintenance data, including care, repair and cleaning instructions. Include in Project closeout documents.
- 1.04 DELIVERY, STORAGE AND HANDLING
- A. Deliver Plastic Fabrications, systems and specified items in manufacturer's standard protective packaging.
 - B. Do not deliver Plastic Fabrications, system, components and accessories to Project site until areas are ready for installation.
 - C. Store materials in a flat orientation in a dry place that is not exposed to exterior elements.
 - D. Handle materials to prevent damage to finished surfaces. Provide protective coverings to prevent damage or staining following installation for duration of project.
- 1.05 PROJECT CONDITIONS
- A. Field verify measurements and conditions of installation.
 - B. Examine all details. Provide proper fitting to details as indicated.
 - C. Protect work from damage during and after installation until project acceptance.
- PART 2 PRODUCTS**
- 2.01 MANUFACTURERS
- A. Basis of Design Manufacturer: 3FORM INC.

- B. Other Acceptable Manufacturers: Plastic Fabrication Systems manufactured by other manufacturers will be considered if materials meet the requirements of the Basis of Design and the color and style are acceptable matches as approved by the Architect prior to bid opening. These additionally approved manufacturers will be included by Addendum. An unacceptable color match or style is reason for disapproval of product and manufacturer. No substitutions will be considered after bid opening

2.02 MATERIALS AND COMPONENTS

- A. Engineered polyester resin - Basis of Design Product: Plastic Fabrications is based on VARIA produced panels as provided by 3FORM, INC. (Susan Studer 859-653-4069).
1. Interlayer Materials: Compatible with polyesters and bonding process to create a monolithic sheet of material when complete.
 2. Thickness: 3/8"
 3. Sheet minimum performance attributes:
 - a. Rate of Burning (ASTM D 635). Material must attain CC1 Rating for a nominal thickness of 1.5 mm (0.060 in.) and greater.
 - b. Self-Ignition Temperature (ASTM D 1929). Material must have a Self-ignition temperature greater than 650°F.
 - c. Density of Smoke (ASTM D 2843). Material must have a smoke density less than 75%.
 - d. Flame spread and Smoke developed testing (ASTM E 84).
 - e. Material must be able to meet a level of Class A (Flame spread less than 25 and smoke less than 450) at thickness of 1".
 - f. Room Corner Burn Test (NFPA 286). Material must meet Class A criteria at ¼" thickness as described by the 2003 *International Building Code*.
 - g. Extent of Burning (UL 94). Must submit UL card.
 - h. Impact strength. Minimum impact strength test as measured by ASTM D3763 of 20 ft. lbs.
 - i. Safety Glazing. Material must attain a Class A impact rating in accordance with ANSI Z97.1-2004 at 1/8" thickness.
 - j. UPITT Test for Combustion Product Toxicity: Product must be recorded as "not more toxic than wood".
 - k. Dynamic environmental testing (ASTM standards D 5116 and D 6670). Panels must not have detectable VOC off-gassing agents
 - l. Panels must be produced from a minimum of 40% post-industrial recycle content. This recycle content must be certified by a recognized 3rd party certification group, such as Scientific Certification Systems (SCS).
 - m. Tensile Strength – ASTM D638: 10,000 psi.
 - n. Flexural Strength – ASTM D790: 14,600 psi.
 - n. Abrasion Resistance – ASTM D1044
 - o. 10 Cycles: Haze 15%
 - p. 200 Cycles: Haze 50%
 - q. Hardness (Rockwell) – ASTM D785: M-93.
 - r. Tensile Impact Strength – ASTM D1822: 20 ft. lbs./in².

- B. Sliding and Fixed Panels: 3FORM Slide 04
 - 1. Aluminum alloy and temper as recommended by manufacturer to comply with requirements of performance, fabrication, application of finish and control of color. Comply with ASTM B221 for extruded shapes.
 - 2. Provide aluminum shapes, parts and extrusions as recommended by manufacturer. Include frame components, bottom shoes, top and bottom rollers, top and bottom track, glazing channels and miscellaneous components for complete installation as indicated.
 - 3. Door lock and latch: Provide with lock cylinder and handles on both sides. (3-15-4445-K and 3-15-4450-K).

- C. Fasteners: Aluminum or non-magnetic stainless steel. Provide concealed fasteners wherever possible. Provide Phillips flat-head machine screws where exposed. Finish of exposed fasteners to match aluminum work. Concealed fasteners may be zinc plated or cadmium plated steel.

2.03 FABRICATION

- A. General: Fabricate Plastic Fabrications to designs, sizes and thicknesses indicated and to comply with indicated standards. Sizes, profiles and other characteristics are indicated on the drawings.

- B. Comply with manufacturer's written recommendations for fabrication.

- C. Machining: Acceptable means of machining are listed below. Ensure that material is not chipped or warped by machining operations.
 - 1. Sawing: Select equipment and blades suitable for type of cut required.
 - 2. Drilling: Drills specifically designed for use with plastic products.
 - 3. Milling: Climb cut where possible.
 - 4. Routing
 - 5. Tapping

- D. Forming: Form products to shapes indicated using the appropriate method listed below. Comply with manufacturer's written instructions.
 - 1. Cold Bending
 - 2. Hot Bending
 - 3. Thermoforming: Acceptable only on uncoated material.
 - 4. Drape Forming
 - 5. Matched Mold Forming
 - 6. Mechanical Forming

- E. Laminating: Laminate to substrates indicated using adhesives and techniques recommended by manufacturer.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine substrates, supporting structure and installation conditions. Do not proceed with sliding glass doors erection until unsatisfactory conditions have been corrected.
- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.02 INSTALLATION

- A. General
 - 1. Do not install component parts that are observed to be defective, including warped, bowed, dented, abraded and broken members. Remove and replace members that have been damaged during installation or thereafter before time of acceptance.
 - 2. Do not cut or trim component parts during erection, in a manner which would damage finish, decrease strength, or result in a visual imperfection or a failure in performance of the work.
- B. Install sliding and fixed panels in accordance with manufacturer's instructions and recommendations.
- C. Install component parts level, plumb, true to line and with uniform joints and reveals. Secure to structure with non-staining and non-corrosive shims, anchors, fasteners, spacers and fillers.
- D. Adjust operating hardware to function properly, without binding and to provide tight proper fit at contact points.

3.03 CLEANING AND PROTECTION

- A. Protect panels from breakage immediately upon installation, by attachment of streamers to framing held away from glass. Do not apply markings of any type to surfaces.
- B. Immediately before acceptance of the work, clean thoroughly. Demonstrate proper cleaning methods to Owner's maintenance personnel during final cleaning. Prepare a "Cleaning and Maintenance Manual" listing types of cleaning compounds, cleaning methods and glazing materials used for cleaning, repair and maintenance of work and turn over to Owner upon acceptance of the work.

END OF SECTION

SECTION 07 92 00

JOINT SEALANTS

PART 1 GENERAL

1.01 SCOPE

- A. General: Prepare joints and apply sealant at all locations which normally require sealing to prevent infiltration of air, water, and insects and to reduce transmission of sound.
- B. Apply sealants to non-static joints. Include the following:
 - 1. joints between different wall materials
 - 2. termination njoints between wall materials and adjacent materials
 - 3. perimeter seal of metal door and borrowed light frames where they abut masonry
 - 4. other applications indicated
- C. Sealing of all interior locations where materials or equipment do not fit together or against the adjoining surface with a hairline joint.
- D. Caulking of interior static joints. Include the following:
 - 1. perimeter seal of metal door and borrowed light frames where they abut drywall
 - 3. intersection of grilles and louvers with adjacent surfaces
 - 4. intersection of cabinets, casework and similar items applied to or recessed in walls
 - 5. other applications indicated
- E. Sealing at intersection countertops and side/backsplashes to each other and to wall.

1.02 GENERAL PERFORMANCE

- A. Except as otherwise indicated, joint sealant is required to establish and maintain airtight and waterproof continuous seals on a permanent basis, within recognized limitations of wear and aging as indicated for each application.
- B. Failures of installed sealant to comply with this requirement will be recognized as failures of both materials and workmanship.

1.03 SUBMITTALS

- A. Submit manufacturer's product data and installation instructions.

1. Certification, in the form of manufacturer's standard data sheet or by letter, that each type of compound and sealant to be furnished complies with these specifications.
 2. Statement that each product to be furnished is recommended for the application shown and is compatible with all materials to which applied.
 3. Instructions for handling, storage, mixing, priming, installation, curing and protection for each type of sealant.
- B. Submit manufacturer's color chart for color selections.
- C. Submit cured sealant samples in colors required for the work. Architect's approval will be for color only. Compliance with other requirements is the Contractor's responsibility.

1.04 STORAGE AND HANDLING

- A. Prevent inclusion of foreign matter or the damage of materials by water or breakage.
- B. Procure and store in original containers until ready for use.
- C. Materials showing evidence of damage shall be rejected.

1.05 WARRANTY

- A. Contractor and joint sealant applicator shall jointly warranty joint sealant work for five (5) years from date of final acceptance. Warranty shall include replacing joints which fail to perform as airtight; or fail in adhesion, cohesion, abrasion resistance, weather resistance, extrusion resistance, migration and stain resistance, general durability or any other form of apparent deterioration (excluding inherent qualities and limitations clearly specified in the manufacturer's submitted product data).
- B. Comply with these specifications for repair or replacement of work.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Definition: The term "sealant" will be understood to be an elastomeric type. The term "caulk" will be understood to be a synthetic resin base of highest quality acrylic latex compound.
- B. General: Provide colors as selected by Architect from manufacturer's standard colors. Select materials for compatibility with joint surfaces and other indicated exposures. Where exposed to foot traffic, select materials of sufficient strength and hardness to withstand stiletto heel traffic without damage or deterioration of sealant system.

- C. Manufacturers: BOSTIK; DOW CORNING CORPORATION; EUCLID CHEMICAL; TREMCO MANUFACTURING COMPANY; GENERAL ELECTRIC COMPANY; SIKA CHEMICAL CO.; MAMECO INTERNATIONAL; SONNEBORN; VULCHEM.
1. Manufacturer's listed under the following applications are for basis of design. Equal products by above listed manufacturers are acceptable.
- D. Horizontal Wearing Expansion Joints: Two-part polyurethane based elastomeric sealant, complying with ASTM C920, Class 25, Type M, Grade P. Self-leveling or gun grade type as recommended by manufacturer for application shown.
1. BOSTIK Chem-Calk 550
 2. EUCLID Eucolastic II
 3. SONNEBORN Sonolastic SL 2
 4. TREMCO THC 900/901
- E. Vertical and Overhead Joints: Single or multi-component polyurethane gun-grade, non-sag sealant complying with ASTM C920, Type S or M, Class 25, Use NT, M, A, Grade NS; minimum tensile strength (ASTM D412) of 150 psi.
1. EUCLID Eucolastic I or II
 2. SONNEBORN Sonolastic NP 1 or NP 2
 3. BOSTIK Chem-Calk 900
 4. TREMCO Dymonic
- F. Sealants at Countertops, Backsplashes and Plumbing Fixtures: ASTM C920, Type S, Grade NS, Class 25. Provide with mildew resistive additive.
1. Sealant Colors
 - a. Countertops and Backsplashes: Clear.
 - b. Plumbing Fixtures: White, unless colored fixtures are selected, then sealant color shall match fixture color.
 2. Manufacturers/Products
 - a. DOW 786
 - b. GE SCS 1702.
 - c. SONNEBORN Sonolastic Omnipus
 - d. TREMCO Tremsil 600
- G. Caulk Joints – Interior, Static - Paintable: High quality acrylic latex compound, non-staining non-bleeding complying with ASTM C834, as supplied by one of the above listed manufacturers.

2.02 ACCESSORIES

- A. Joint Primer/Sealer: Non-staining type, recommended by sealant manufacturer; compatible with joint forming material.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming material.

- C. Bond Breaker Tape: Pressure sensitive polyethylene or plastic tape, recommended by sealant manufacturer, to suit applications where bond to substrate should be avoided for proper joint sealant performance.
- D. Joint Backing: Compressible rod stock of polyethylene foam, polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable non-absorptive material recommended by sealant manufacturer for back-up sealant; compatible with joint sealant, oversized 30%.
 - 1. Provide closed cell expanded rubber complying with ASTM D1056, Class 2, Type C.
- E. Solvents: Cleaning agent recommended by the manufacturer of the sealant in writing to Architect.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine substrates and installation conditions. Do not proceed with joint sealant work until unsatisfactory conditions have been corrected.
- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.02 PREPARATION

- A. Clean, seal and prime surfaces in accordance with manufacturer's recommendations. Confine primer/sealant to areas of sealant bond.
- B. Remove dust, dirt, loose coatings, moisture and other substances which could interfere with sealant bond.
- C. Remove lacquers and protective films from metal surfaces.

3.03 INSTALLATION

- A. Install joint sealant materials and accessories in strict accordance with manufacturer's installation instructions.
- B. Set joint filler units at depth or position in joint as indicated to coordinate with other work. Do not leave voids or gaps between ends of joint filler units.
- C. Install sealant backer rod, except where recommended to be omitted by sealant manufacturer for application indicated. Use rod diameter that will cause compression when installed.
- D. Install bond breaker tape and where required by manufacturer's recommendations to ensure that sealants will perform as intended.

- E. Apply joint sealants in uniform, continuous ribbons without gaps or air pockets, with complete "wetting" of joint bond surfaces on both sides. Fill sealant rabbet to a slightly concave surface, slightly below adjoining surfaces. At horizontal joints between a horizontal surface and vertical surface, fill joint to form a slight cove, so that joint will not trap moisture and dirt. Hand tool and finish all joints.
- F. Install joint sealants within recommended temperature ranges and to depths indicated or when not indicated, as recommended by sealant manufacturer. For normal moving vertical and horizontal joints, fill joints to a depth equal to 50% of joint width, but not more than 1/2" deep nor less than 1/4" deep, measured at the center section of bead.
- G. Confine materials to joint areas with masking tapes or other acceptable methods. Remove excess sealant materials promptly as work progresses and clean adjoining surfaces.

3.04 CLEANING

- A. Upon completion, remove and dispose of masking materials; remove all excess sealing materials; clean adjacent materials of all soil and stain resulting from sealing operations.
 - 1. Replace damaged material and material which cannot be properly cleaned.

END OF SECTION

SECTION 08 12 13
HOLLOW METAL FRAMES

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide metal frames as indicated and specified. Work includes, but is not limited to:
 - 1. Standard steel frame.

1.02 QUALITY ASSURANCE

- A. Reference Standards: Wherever the following abbreviations are used herein, they shall refer to the corresponding standard.
 - 1. ANSI: American National Standards Institute.
 - 2. ASTM: American Society for Testing and Materials.
 - 3. SDI: Steel Door Institute.
 - 4. DHI: Door and Hardware Institute.

1.03 SUBMITTALS

- A. Submit manufacturer's product data and installation instructions.
- B. Submit shop drawings. Indicate:
 - 1. Hardware locations, installation methods and hardware reinforcements.
 - 2. Dimensions and shapes of materials, anchorage and fastening methods.
 - 3. Wall opening construction and connection to other work.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver metal door frames cartoned or crated for protection during transit and job delivery. Provide sealed wrapping for factory.
- B. Store frames inside the building in a dry, well-ventilated area. Protect from damage, wetting and deterioration in accordance with manufacturer's recommendations.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Manufacturer: STEELCRAFT MFG. CO; CECO CORP.; PIONEER INDUSTRIES; REPUBLIC BUILDERS PRODUCTS CORP.; CURRIES.

2.02 MATERIALS AND COMPONENTS

A. Materials

1. Cold-Rolled Steel: Commercial Steel in accordance with ASTM A1008, "Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High Strength Low-Alloy and High Strength with Improved Formability"; Type B; suitable for exposed applications.
2. Hot-Rolled Steel Sheet: Commercial Steel in accordance with ASTM A1011, "Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High Strength Low-Alloy with Improved Formability, and Ultra-High Strength"; Type B; free of scale, pitting, or surface defects; pickled and oiled.

B Comply with SDI 100 material and fabrication recommendations and as specified.

C. Standard Metal Frames

1. Interior Frames: Fabricated from either commercial grade cold-rolled steel conforming to ASTM A1008 or commercial grade hot-rolled and pickled steel conforming to ASTM A1011, minimum 0.053" thick. Set-up and welded type, all miters clean cut, reinforced, fully seam welded with exposed welds ground smooth.
2. Profile: Double rabbet, jamb face and depth as indicated.
3. Hardware Reinforcements: Meet SDI 107 requirements.

2.03 FABRICATION

A. Reinforce and prepare frames to receive hardware. Fit for hardware at the factory to template. Do all necessary cutting, drilling and tapping. Comply with applicable requirements of ANSI A115 series specifications for door frame preparation for hardware.

1. Existing door and hardware to be installed in new frame. Coordinate hardware with frame fabrication.

B. Provide surfaces smooth and free from defects, warp or buckle with arises straight and sharp.

C. Reinforce frames to receive surface applied hardware. Drilling and tapping for surface applied finish hardware may be done at project site.

D. Locate finish hardware as shown on drawings or, if not shown, in accordance with DHI "Recommended Locations for Builder's Hardware."

E. Frame Fabrication

1. Provide cutouts for mortised hardware, accurately located and made to fit hardware.

2. Punch frames for door silencers, three on strike side for single doors. Factory install plastic caps. Stick-on silencers are not acceptable.
3. Provide minimum three anchors of suitable design for each jamb.
4. Floor Anchors: Provide floor clip on bottom of each jamb. Provide angle spreaders at bottom of each set-up frame.

F. Shop Painting

1. Clean, bonderize or chemically treat and paint exposed surfaces of steel frame units, including galvanized surfaces.
2. Clean steel surfaces of mill scale, rust oil, grease, dirt and other foreign materials before application of paint. Sand free of imperfections.
3. Apply one baked-on shop coat of rust-inhibitive prime paint in accordance with ASNI A224.1. Provide a smooth, uniformly finished surface ready to receive finish paint.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine substrates, rough openings and installation conditions. Do not proceed with metal door frame work until unsatisfactory conditions have been corrected.
- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.02 INSTALLATION

- A. Install metal door frames in accordance with manufacturer's instructions and recommendations.
- B. Placing Frames
 1. General
 - a. Comply with ANSI/SDI A250.11 (SDI 105) "Recommended Erection Instructions for Steel Frames."
 - b. Erect frames in proper position to receive partition work before construction of enclosing walls. Set frames accurately in position, plumbed, aligned with heads level and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders.
 2. Install 3 wall anchors per jamb at hinge and strike levels.
- C. Immediately after erection, sand smooth rusted or damaged areas of frame coat and apply touch-up prime coat of compatible air-drying primer.

END OF SECTION

SECTION 08 14 00

WOOD DOORS

PART 1 GENERAL

1.01 RELATED SECTIONS

- A. Sliding Doors (Frames): Section 08 32 13.

1.02 QUALITY ASSURANCE

- A. Provide wood doors fabricated by one manufacturer to ensure uniformity in appearance and construction.
- B. Reference Standards
 - 1. Window and Door Manufacturers Association (WDMA): WDMA IS 1A-04.
 - 2. Architectural Wood Work Institute: AWI "Quality Standards, Guide Specification" requirements.

1.03 SUBMITTALS

- A. Submit manufacturer's product data and installation instructions for each type of wood door required.
 - 1. Include details of core and edge construction.
 - 2. Include certification indicating compliance with specification requirements.
- B. Submit Shop Drawings
 - 1. Indicate location and size of each door, elevation of each kind of door, details of construction, location and extent of hardware blocking and other pertinent data.
 - 2. Identify doors in accordance with drawing door schedule.
- C. Submit sample corner section, 12" square, showing required veneer and edge construction.
- D. Finish Samples
 - 1. Factory Finished Doors: Submit three (3) flitch samples of each species of face veneer with factory applied stain and finish as specified and indicated illustrating expected range of color and grain variation.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Store and protect doors in accordance with manufacturer's recommendations and WDMA.
- B. Following are general guidelines. For more specific information refer to WDMA's Appendix Section "Care and Installation at Job Site."
 - 1. Deliver doors in manufacturer's original unopened protective packaging or wrapper.
 - a. Store doors flat and off the floor on a level surface in a dry, well-ventilated building. Do not store on edge. Protect doors from dirt, water and abuse.
 - b. When handling doors, always lift and carry. Do not drag across other doors or surfaces. Handle with clean hands or gloves.
 - c. Each door will be marked on top rail with opening number.

1.05 WARRANTY

- A. Submit written warranty on door manufacturer's standard form, signed by manufacturer, installer and Contractor, agreeing to repair or replace defective doors which have been warped (bowed, cup or twist), or which show telegraphing of core construction below face veneer, or delamination, or do not conform to tolerance limitations of WDMA I.S.1A or other defects in materials and workmanship for the life of the installation.
- B. Warranty shall also include furnishing, installing and finishing new doors meeting specification requirements that may be required due to repair or replacement of defective doors.

PART 2 PRODUCTS

2.01 MATERIALS AND COMPONENTS

- A. Interior Flush Doors Solid Core: Meet or exceed WDMA I.S.1A Industry Standard for Wood Flush Doors requirements and as specified. WDMA I.S.1A. Performance Grade – Heavy Duty.
 - 1. Interior Flush Doors Solid Core: Provide one of the following cores with hardwood veneers:
 - a. Stave Lumber Core (SLC-5) may be a combination of solid, low-density hardwood lumber blocks or strips not more than 2-1/2" wide of one species of wood between 6% to 9% moisture content. Joints to be tight and staggered in adjacent rows. Lumber density is 25 to 27 lbs. per cubic foot. Formaldehyde free.
 - b. Structural Composite Lumber Core (SCLC-5) is an engineered hardwood composite sometimes referred to as LSL (Laminated Strand Lumber).

The material complies with WDMA minimum performance levels for interior applications with screw holding power of 540 lbs., modulus of rupture of 6,500 psi, modulus of elasticity of 1,300,000 psi and density of 38 lbs per cubic foot. Formaldehyde free.

- B. Moldings: Trim louver and glass openings with recessed bead type wood moldings, species matching door face veneer species. Profiles as selected by the Architect from manufacturer's standard profiles.

2.02 FABRICATION

- A. Flush Doors: Fabricate doors in accordance with WDMA I.S. 1A, "Premium Grade" requirements for transparent stained finish. Formaldehyde free.

1. Core Construction: Bond stiles and rails to core and sand entire unit prior to assembly of face veneers.
2. Number of Plies: 5.
3. Face Veneers: Minimum 1/50" thick before sanding, plain sliced white maple hardwood.
4. Door Thickness: 1-3/4" thick.
5. Adhesive: Type I, waterproof.
6. Edge Strips: Stile edges hardwood species matching face veneer; bonded to core; 1-1/8" minimum width after trimming. Top and bottom edges hardwood of mill option.
7. Match Between Veneer Leaves: Book matched for color and grain.
8. Assembly of Veneer Leaves on Door Faces: Running match.
9. Hardware: Factory machine for mortise hardware using template provided by hardware manufacturer.
10. Reinforcement: Reinforce doors to receive hardware specified.
 - a. Hinge Attachment: Stiles and rails to be continuously glue bonded to the core so that screw stress is transmitted directly to the core.
 - b. Closure, Exit Device and Other Surface Mounted Hardware: Provide top rail 2-1/2" or more in width to hold closer fasteners and solid wood blocking for all other surface applied hardware.

- B. Factory Finish

1. Comply with recommendations of WDMA for factory finish of doors utilizing manufacturer's standard stain and clear top finishing system similar to the following:
 - a. Filler/Stain: Color as selected by Architect.
 - b. Clear sealer.
 - c. Clear topcoat.
 - d. Sanding.
 - e. Clear topcoat.
 - f. Packaging.

- C. Individually package doors at factory with manufacturer's standard packaging or wrapping for delivery to job site.

- D. Manufacturer: MARSHFIELD DOOR SYSTEMS; EGGERS; ALGOMA; OSHKOSH; V T INDUSTRIES.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine substances, rough openings and installation conditions. Do not proceed with wood door installation until unsatisfactory conditions have been corrected.
- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.02 PREPARATION

- A. Verify metal frame dimensions and hardware mortises in metal frames with metal frame manufacturer.

3.03 INSTALLATION

- A. Condition doors to average prevailing humidity in installation area before hanging.
- B. Install doors in accordance with manufacturer's installation instructions. Job fit and prepare doors to receive hardware. Bevel 1/8" in 2" at strike edges for clearance in arc of swing. Seal cut surfaces, tops, bottoms and edges with sanding sealer after fitting and machining.
- C. Hang doors straight, plumb and square securely anchored into position. Adjust doors to provide uniform clearance and to contact stops uniformly. Remove and replace doors that are warped, bowed or otherwise damaged and cannot be properly fit to the opening.

3.04 PROTECTION

- A. Protect installed doors from soiling, staining and damage until final acceptance.
- B. Repair or replace doors damaged beyond acceptable repair as directed by the Architect.

END OF SECTION

SECTION 08 32 13

SLIDING DOOR

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide sliding wood door assemblies. Assemblies include:
 - 1. Top supported, single slide wood door assembly, complete with track, trim, trolleys, stops, seals and related hardware.
 - 2. Anchors, fasteners and accessories to complete the work.
- B. Coordinate frame dimensions with gypsum board/metal stud walls.

1.02 RELATED SECTIONS

- A. Wood Door: Section 08 14 00.

1.03 QUALITY ASSURANCE

- A. Installation: Performed by manufacturer's authorized installer.
- B. Reference Standards
 - 1. Aluminum Association, Inc. (AA):
 - a. Aluminum Standards and Data.
 - b. Designation System for Aluminum Finishes.
 - c. Standards for Anodized Architectural Aluminum.
 - 2. American Society for Testing and Materials (ASTM):
 - a. ASTM B221 "Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes and Tubes".
 - 3. Architectural Aluminum Manufacturers Association (AAMA):
 - a. AAMA "Curtain Wall #10 Care and Handling of Architectural Aluminum from Shop to Site".

1.03 SUBMITTALS

- A. Submit manufacturer's product data and installation instructions.
- B. Submit shop drawings for fabrication and installation of sliding door frame assemblies. Include elevations and detail sections of every typical member. Show anchors and other elements not included in manufacturer's standard data
- C. Submit material and finish samples required for the work.
 - 1. Aluminum finish on 12" lengths of aluminum extrusions.

- D. Maintenance Data: Furnish written instructions describing recommended materials and methods for proper maintenance of door assembly. Provide special tools as required.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Pack, deliver, handle, store and protect materials from damage in accordance with AAMA Curtain Wall #10 "Care and Handling of Architectural Aluminum" recommendations.
 - 1. Remove paper type wrappings when unloading.
 - 2. Store materials inside the building whenever possible in clean, dry, ventilated areas free of dust or corrosive fumes.
 - 3. Stack members vertically or on edge, shim between components to provide water drainage and ventilation. Protect with adequate coverings, placed to provide adequate air circulation.
- B. Do not incorporate damaged materials into the work.

1.05 PROJECT CONDITIONS

- A. Field verify measurements and conditions of installation.
- B. Examine all details. Provide proper fitting to details as indicated.
- C. Protect work from damage during and after installation until project acceptance.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturer: Genius Moveable Wall Sliding Door by KI or similar sliding door systems manufactured by HAWORTH, DIRTT or INSCAPE.

2.02 MATERIALS AND COMPONENTS

- A. Aluminum Extrusions: Architectural Grade aluminum prime billet. Provide manufacturer's standard sizes, shapes and profiles for members of the systems and components.
 - 1. Aluminum alloy and temper as recommended by manufacturer to comply with requirements of performance, fabrication, application of finish and control of color. Comply with ASTM B221 for extruded shapes.
 - 2. Provide all miscellaneous extrusions complete the sliding door assemblies.
- B. Sliding Hardware: Provide manufacturers standard trolleys, stops and related hardware coordinated with track assembly.

- C. Fasteners: Aluminum or non-magnetic stainless steel. Provide concealed fasteners wherever possible. Provide Phillips flat-head machine screws where exposed. Finish exposed fasteners to match aluminum work. Other concealed fasteners may be zinc plated or cadmium plated steel.
- D. Perimeter Seals: Provide manufacturers PVC or neoprene type acoustic door seals specifically manufactured for seals to be adjustable to ensure tight seal between door leaf and frame.sliding door applications.

2.03 HARDWARE

- A. Recessed Door Pull: WHITTINGTON Rectangular Pocket Door Pull; 2" wide by 8" high; ½" deep finger recess. Locate on each side of door. Brushed nickel finish.
- B. Lock: Manufacturer's standard type. Provide locking from Lounge side of door.

2.04 FABRICATION

- A. Sliding Door Frames: Manufacturer's standard aluminum extrusion, factory-machined to receive hardware, for 1-3/4-inch doors.
 - 1. Frame Finishes: Factory-applied powder coat paint.
 - 2. Frame Color: As selected by Architect
 - 3. Frame Type: Single sliding.
- B. Coordinate sliding door work with other work for proper sequence of construction without delays. Verify dimensions of supporting structure and other elements which precede sliding door work, before fabrication of required components. Provide for erection tolerances for other work where field measurements cannot be obtained.

2.05 FINISH

- A. All exposed aluminum surfaces: Powder coated, baked enamel; AAMA 2603.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine substrates, supporting structure and installation conditions. Do not proceed with sliding door installation until unsatisfactory conditions have been corrected.
- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.02 INSTALLATION

- A. General

1. Do not install component parts which are observed to be defective, including warped, bowed, dented, abraded and broken members. Remove and replace members which have been damaged during installation or thereafter before time of acceptance.
 2. Do not cut or trim component parts during erection, in a manner which would damage finish, decrease strength, or result in a visual imperfection or a failure in performance of the work.
- B. Install sliding doors in accordance with the manufacturer's installation instructions and final shop drawings.
- C. Install component parts level, plumb, true to line and with uniform joints and reveals. Secure to structure with non-staining and non-corrosive shims, anchors, fasteners, spacers and fillers.
- D. Adjust operating hardware to function properly, without binding and to provide tight proper fit at contact points.

END OF SECTION

SECTION 09 21 16

GYPSUM BOARD SYSTEMS

PART 1 GENERAL

1.01 SCOPE

- A. Provide gypsum board systems consisting of wall board and framing as indicated and specified. Work includes:
 - 1. Gypsum drywall wall systems.
 - 2. Suspended drywall ceilings and soffits including suspension framing system.
 - 3. Edge trim, corner beads, fasteners, joint treatment materials and other accessories required for a complete installation.

1.02 QUALITY ASSURANCE

- A. Gypsum Board Systems: Comply with ASTM C840 "Application and Finishing of Gypsum Board", and as specified.
- B. Metal Framing System: Comply with ASTM C754 "Installation of Steel Framing Members to Receive Screw Attached Gypsum", and as specified.
- C. Reference Standards: Wherever the following abbreviations are used herein they shall refer to the corresponding standard:
 - 1. ASTM: American Society for Testing and Materials.
 - 2. GA: Gypsum Association.
- D. Guarantee: Submit written guarantee stating that cracks, delaminations or other imperfections in the drywall work which may develop within a period of 2 years from date of acceptance will be repaired at no cost to the Owner.

1.03 SUBMITTALS

- A. Submit manufacturer's product data and installation instructions for each gypsum board system component.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's original, unopened labeled containers.
- B. Store, protect and handle materials in accordance with manufacturer's recommendations to prevent damage, soiling and deterioration.

Protect cold-formed metal framing from corrosion, deformation and other damage during delivery, storage and handling per requirements of AISI's "Code of Standard Practice".

- C. Protect adjoining surfaces against damage and soiling.

1.05 JOB CONDITIONS

- A. Coordinate installation sequencing with work of other trades.
 - 1. Verify completion of other work, including that of other trades, which will be concealed by gypsum drywall construction before installation of wallboard.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Gypsum Board: U.S. GYPSUM CO.; CERTAINTEED CORP.; GEORGIA-PACIFIC CORP.; NATIONAL GYPSUM COMPANY; TEMPLE-INLAND; LAFARGE.
- B. Studs, Framing and Furring: CLARK DIETRICH BUILDING SYSTEMS; MARINO/WARE; STATE BUILDING PRODUCTS; gypsum board manufacturers listed above.
- C. Others as listed for specific products.

2.02 STEEL STUDS

- A. Type: Screw type "C" shape, roll formed sheet steel members conforming to requirements of ASTM C645.
 - 1. Material: ASTM A653 steel with minimum yield strength of 33 ksi.
 - 2. Finish: Hot-dip galvanized coating, complying with ASTM A653 G40.
 - 3. Gage and Width: 20 gage x 3-5/8"
 - 4. Flange Width: Nominal 1-1/4".
- C. Runners and Tracks: Designed and sized to receive studs. Gage to match studs except deflection tracks.
 - 1. Deflection Track: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; 20 gage thickness and in width to accommodate depth of studs. Provide one of the following:
 - a. #53 FlexTrack, 20 gage typical, by SUPERIOR METAL TRIM PRODUCTS
 - b. 20 gage top track with 2" minimum legs and 20 gage Spazzer 9200 Stud Spacer Bar by CLARK DIETRICH BUILDING SYSTEMS
 - c. Slip Track (Slp Trk) by BRADY CONSTRUCTION INOVATIONS
 - d. The System by METAL-LITE
 - e. The Three Legged Dog by FLEX-ABILITY CONCEPTS.

- f. A double slip track, 20 gage, can be used in lieu of the proprietary deflection tracks specified above. Legs of tracks shall be minimum 2".
- D. Backing Plates (Blocking): Steel sheet for blocking; width to fit framing spacing; height to be 6" unless otherwise indicated.

- 1. Base Metal Thickness: Minimum 0.0598".

2.03 CEILING/SOFFIT SUSPENSION SYSTEM

- A. Provide the following materials unless otherwise indicated on the drawings. Metals used in exterior or areas subjected to moisture to be hot-dipped galvanized in accordance with ASTM A653 or A123 as applicable.

- 1. Main Runners: Cold-rolled steel channels; not less than 16 gage; G-90 galvanized finish for exterior and moist areas, black asphaltum painted for other areas. Spacing as required, but not to exceed 48" o.c.
 - a. 1-1/2" deep where structural support framing is at 48" o.c. or less.
 - b. 2" deep where structural support framing is over 48" and less than 66" o.c.
- 2. Cross Furring
 - a. Cold-rolled steel channels, not less than 16-gage; 3/4" size; same finish as main runners.
 - b. Hat shape, 7/8" deep, 25-gage. ASTM A653 G-60 hot-dipped galvanized.
 - c. 2-1/2" x 20-gage, G-60 galvanized steel studs. Provide for multiple layer applications. Provide 12" long nested studs at suspension points.
- 3. Wire: Galvanized coating to meet Fed. Spec. QQ-W-461, Class 1.
 - a. Tie Wire: Minimum 16-gage.
 - b. Hanger Wire: Minimum 8-gage.

- C. Optional Framing: At contractor's option, proprietary furring system may be used in lieu of black iron system.

- 1. Description: System consisting of furring runners, furring tees, cross tees and hanger wires, designed and manufactured specifically for suspending gypsum board ceiling.
 - a. Non-fire rated.
 - b. Electrogalvanized, cold-rolled steel, 0.020" thick.
 - c. Double web members; 1-1/2" high with 1-3/8" capped face.
- 2. Manufacturer: 640 System by CHICAGO METALLIC CORP.; Drywall Suspension System by USG, WORTHINGTON STEEL COMPANY, Watercheck LaFARGE GYPSUM.
- 3. Reference: ASTM C635, heavy duty.

2.04 GYPSUM BOARD

- A. General: Comply with ASTM C1396.

B. Moisture and Mold Resistant Gypsum Wallboard

1. ASTM C1396 (Section 5), Type X.
2. Edges: Tapered.
3. Thickness: 5/8 inch, unless otherwise indicated.
4. Acceptable products: Mold Tough and Mold Tough Firecode (Type X) by USG; XP and XP Fire-Shield by NATIONAL; ToughRock and ToughRock Type X by GEORGIA-PACIFIC; Mold Defense and Mold Defense Type X by LAFARGE or equal by other gypsum board manufacturers listed in 2.01A.
5. Water Absorption: ASTM C473, the average water absorption for panels is not greater than 5 percent by weight after two-hour immersion.
6. Resistance to Mold Growth: ASTM D3273, "Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber," the panel score was 10.

2.06 ACCESSORIES

A. Fasteners: Drywall screws and metal framing screws per manufacturer's instructions and recommendations for type and size, based on construction and conditions involved.

1. Steel Drill Screws: ASTM C1002.
2. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick specified in Section 05 40 00.

B. Trim: ASTM C1047.

1. Manufacturers
 - a. Metal: BEADEX MANUFACTURING; CLARK DIETRICH BUILDING SYSTEMS; listed gypsum board manufacturers
 - b. Vinyl: VINYL TECH; VINYL CORP.; TRIM TEX
2. Corner Beads - Outside, Square Corners: 1-1/4 inch x 1-1/4 inch heavy gauge galvanized steel or vinyl, perforated.
3. Corner Beads - Outside, Non-square Corners: BEADEX B-1 Splay Flexible Corner or equal. Concealed metal; two galvanized continuous strips laminated with paper trim; for application without mechanical fasteners.
4. Exposed Edges (Casing Beads): L-bead or LC-bead; exposed long flange receives joint compound. Size to suit wallboard. J-shaped bead that does not receive joint compound is not permitted.

C. Joint Treatment Materials: ASTM C475.

1. Joint Tape. Width to adequately cover joint.
 - a. Interior Gypsum Board: Paper.
2. Joint Taping Compound: Designed for bonding tape to wallboard and coating corner beads and fasteners.
3. Joint Topping Compound: Designed to sand smooth and feather well for finished surface. Type as recommended by board manufacturer.

- D. Additional Item: All additional accessories to complete work including nails and anchors to secure frames to walls and floors.

PART 3 EXECUTION

3.01 PREPARATION

- A. Maintain uniform building temperature range not less than 55 degrees F., for 24 hours before, during and after gypsum panel installation and joint finishing treatment.
- B. Provide adequate lighting and ventilation during installation and joint finishing treatment.

3.02 INSPECTION

- A. Examine substrates and installation conditions. Do not proceed with gypsum wallboard work until unsatisfactory conditions have been corrected.
 - 1. Protrusions of framing, twisted framing members, or unaligned members must be repaired before installation of wallboard is started.
- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.03 FRAMING INSTALLATION

- A. Comply with the requirements of ASTM C754 "Installation of Steel Framing Members to Receive Screw Attached Gypsum", and as specified.
- B. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
 - 1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
 - 2. Securely attach runner to floor with expansion anchors or other approved means.
- C. Install all framing plumb and square with spacing as indicated.
- D. Provide supplementary framing, blocking, and bracing at terminations in gypsum board assemblies to support fixtures, equipment services, heavy trim, furnishings, or similar construction. Comply with details indicated and with recommendations of gypsum board manufacturer or, if none available, with United States Gypsum Company's "Gypsum Construction Handbook".

- E. Bridging
 - 1. Up to 10 ft. Wall Height: 1 row.
 - 2. 10 ft. and Over Wall Height: 2 rows of bridging.
- F. Provide a minimum of two (2) screws per connection.

3.05 GYPSUM BOARD INSTALLATION

- A. Gypsum Board Systems: Comply with ASTM C840 "Application and Finishing of Gypsum Board", and as specified.
- B. General
 - 1. Do not proceed with gypsum board installation until blocking, framing, bracing and other supports for subsequently applied work have been installed, reviewed and accepted by the Architect.
 - 2. Do not install gypsum board until work concealed by gypsum board has been installed.
- C. Application
 - 1. Install gypsum board face side out. Do not install imperfect, damaged or damp boards.
 - 2. Butt boards together for a light contact at edges and ends with not more than 1/16" open space between boards. Do not force into place.
 - 3. Locate either edges or end joints over supports. Position boards so that both tapered edge joints abut. Do not place tapered edges against cut edges or ends. Stagger vertical joints over different studs on opposite sides of partitions.
 - 4. Attach gypsum board to framing and blocking as required for additional support at openings and cutouts.
 - 5. Floating Construction: Install gypsum board with "floating" internal corner construction, unless isolation of the intersecting board is indicated.
 - 6. In addition to compliance with the standards, comply with specific requirements indicated for each type of arrangement of gypsum wallboard system shown. Space fasteners in accordance with manufacturer's recommendations and complying with referenced standards.
 - a. Walls and Partitions: Apply sheets horizontally or vertically. Provide maximum sheet lengths to minimize end joints with edges or ends over supports.
 - b. Cut and install panels to eliminate vertical joints in corners of door frames to ceiling.
 - c. Make cutouts to fit within wall plate, register and grille flanged. All cutouts made by knife or saw.
 - d. Make angles and corners clean, true, plumb and square; walls plumb, flat and straight and ceilings flat and level.
 - e. Ceilings: Apply gypsum board on ceilings, before application on walls and partitions. Install in direction and manner to minimize end joints. Stagger end joints over supports

3.06 TRIM AND ACCESSORIES

- A. Install corner beads at external corners of gypsum wallboard. Use longest practical lengths.
- B. Install edge trim wherever edge of gypsum board or sheathing would be exposed or semi-exposed.
 - 1. Provide beaded trim to receive joint compound at all gypsum wallboard work.
 - 2. Provide L-type trim where work is abutted to other work and Kerf-type where work is kerfed to receive kerf leg.
 - 3. Provide U-type trim where edge is exposed, revealed, gasketed or sealant filled.
- C. Attach to framing with steel drill screws. Clinch attachment to wallboard not acceptable.

3.09 FINISHING

- A. Comply with manufacturer's instructions for mixing, handling and application of materials. Apply treatment at joints both directions, at flanges of trim accessories, penetrations of gypsum board (electrical boxes, piping and similar work), fastener heads, surface defects and elsewhere indicated. Apply in manner that will result in each of these items being concealed when applied decoration has been completed.
- B. Prefill open joints of more than 1/16" with special chemical-hardening type bedding compound, before bedding joint tape.
- C. Apply joint tape at joints between gypsum boards, except where trim accessories are indicated.
- D. Do not use topping compound for bedding joint tape.
- E. Apply joint compound for the final coat of joint treatment, unless specifically recommended by the manufacturer for that use.
- F. Walls Above Acoustical Ceiling Systems: Tape and fill joints with two coats of joint compound, sanding not required.
- G. Leave all exposed surfaces smooth and even, ready for painting.
- H. Provide where indicated on the drawings levels of finish as specified in ASTM C840, "Recommended Specification on Levels of Gypsum Board Finish". Levels of finish consist of:

1. Level 1 - **Areas Above Ceilings:** All joints and interior angles shall have tape embedded in joint compound. Provide surface free of excess joint compound. Tool marks and ridges are acceptable.
2. Level 4 – **All Areas Not Indicated to Receive Level 1:** All joints and interior angles to have tape embedded in joint compound and three separate coats of joint compound applied over all joints, angles, fastener heads, and accessories. All joint compound shall be smooth and free of tool marks and ridges.

3.10 ADJUST AND CLEAN

- A. Remove any screw which does not engage into a framing member or spins freely.
- B. When paper face is punctured, drive new screw approximately 1-1/2" from defective fastener and remove defective fastener. Fill damaged surface with compound.
- C. Ridging
 1. Do not repair ridging until condition has fully developed: approximately 6 months after installation or one heating season.
 2. Sand ridges to reinforcing tape without cutting through tape.
 3. Fill concave areas on both sides of ridge with topping compound.
 4. After fill is dry, blend in topping compound over repaired area.
- D. Fill cracks with compound and finish smooth and flush.
- E. Remove and replace panels that are wet, moisture damaged, and mold damaged.
 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

3.11 PROTECTION

- A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.
- B. Protect installed products from damage during remainder of the construction period.

END OF SECTION

SECTION 09 51 13

ACOUSTICAL PANEL CEILINGS

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide acoustical lay-in panel ceiling system as shown and specified.

1.02 RELATED SECTIONS

- A. Gypsum Board Ceiling: Section 09 21 16.

1.03 QUALITY ASSURANCE

- A. Workmanship: Comply with Ceilings & Interior Systems Contractors Association (CISCA) "Ceiling Systems Handbook".
- B. Installation: Performed by an experienced authorized installer approved by acoustical material manufacturer.
- C. Reference Standards: Wherever the following abbreviations are used herein, they shall refer to the corresponding standards.
 - 1. AIMA: Acoustical and Insulating Materials Association.
 - 2. ASTM: American Society for Testing and Materials.
 - 3. CISCA: Ceilings and Interior Systems Contractors Association.

- E. Coordination Between Trades: Quality assurance includes the cooperation with HVAC and Electrical work in regards to ceiling grid layout.

1.04 SUBMITTALS

- A. Product Data
 - 1. Submit manufacturer's product data and installation instructions for each type of acoustical material and suspension system required.
 - 2. Submit manufacturer's written instructions for recommended maintenance practices for each type of acoustical ceiling system required. Include recommendations for cleaning and refinishing acoustical units and precautions against materials and methods that may be detrimental to finishes and acoustical performances.
- B. Samples: Submit 12" square acoustical panel samples for each type of acoustical unit required. Provide 12" long suspension system and edge molding samples.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original, unopened protective packaging, with manufacturer's labels indicating brand name, pattern size, thickness and fire rating as applicable, legible and intact.
- B. Store materials in original protective packaging to prevent soiling, physical damage or wetting.
- C. Store cartons open at each end to stabilize moisture content and temperature.
- D. Do not begin installation until sufficient materials to complete a room are received.

1.06 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- B. Pressurized Plenums (to comply with CISCA's recommendations for cleaning duct system and protecting ceiling units in pressurized plenums from damage and soiling caused by blowing dirt and dust that may be present when duct system is first operated): Operate ventilation system for not less than 48 hours before beginning acoustical panel ceiling installation.

PART 2 PRODUCTS

2.01 SUSPENSION SYSTEM

- A. Exposed "Tee" Grid System
 - 1. Description: Cold-rolled electrogalvanized steel, factory applied white finish paint to match ceiling tile.
 - a. 9/16" exposed face; ARMSTRONG Suprafine; DONN (USG INTERIORS) Finline; CHICAGO METALLIC Tempra 4000.
 - 2. Description: Comply with ASTM C635. Provide systems adequate to support light fixtures, ceiling diffusers, and other normal accessories. Maximum deflection 1/360 of the span. All components of system from one manufacturer, die cut, and interlocking.
 - a. Structural Class: Intermediate duty.
 - b. Type of System: Direct Hung.
 - c. Attachment Devices: Size for five times design load indicated in ASTM C635, Table 1 direct hung.
 - d. Hanger Wires: ASTM A641 galvanized carbon steel, soft temper, prestretched not less than 12 gauge.
 - e. Carrying Channels: 1-1/2" steel channels, hot-rolled or cold-rolled, not less than 0.475 lbs per linear foot, standard finish.

- f. Members: Provide manufacturer's standard exposed runners, cross runners and accessories of type and profiles indicated, with exposed cross runners coped to lay flush with main runners.
- 3. Edge Moldings: Hemmed edge wall angles, cold-rolled electrogalvanized steel, factory applied finish to match grid system.

2.02 ACOUSTICAL UNITS

- A. Acceptable Manufacturers: The following models listed are by ARMSTRONG. Equal products by CELOTEX or U.S. GYPSUM are acceptable.
- B. Type: Ultima #1912, 24" x 24" x 3/4", beveled tegular edge, NRC .70, CAC 35, light reflectance LR-.90, with white, washable finish; 9/16" grid.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine substrates, structure and installation conditions. Do not proceed with acoustical ceiling systems work until unsatisfactory conditions have been corrected.
- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.02 PREPARATION

- A. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling.
 - 1. Avoid use of less than half widths units at borders.
- B. Coordinate with ceiling layout on drawings.
- C. Notify Architect of discrepancies between ceiling layout on drawings and ceiling layout proposed. Do not proceed until approved by Architect.

3.03 INSTALLATION

- A. Suspension System: Comply with ASTM C636 requirements and be water or laser leveled, maximum deflection of 1/360 of span and maximum surface leveling tolerance 1/8" in 12'-0".
- B. Rough Suspension
 - 1. Hangers: Ceiling suspension systems shall not be supported from ductwork, electrical conduit, heating or plumbing lines or any other utility lines. Each utility and the ceiling suspension system shall be a separate installation and each shall be independently supported from the building structure.

Where interferences occur, employ trapeze hangers or supports to avoid interferences with appurtenances requiring servicing. Support all four corners of suspension systems at fluorescent light fixtures.

2. Wall Molding
 - a. Provide edge trim molding at perimeter of acoustical ceiling installation and intermediate vertical surfaces. Use maximum lengths. Miter trim corners to provide tight, accurate joint. Connect moldings securely to substrate surfaces.
 - b. Connect moldings to substrate at intervals not over 16" on center and not more than 3" from ends, leveling with ceiling suspension system to tolerance of 1/8" in 12'-0".

C. Acoustical Units

1. Install acoustical lay-in panels level, in uniform plane, with joints accurately cut to ensure a snug and square fit. All panel faces and edges to be free from damage or soiling.
 - a. Fit border units accurately at borders and penetrations.
 - b. Recreate tegular and decorative edges at wall cuts and other cuts.
 - c. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension-system runners and perimeter moldings.
 - d. For reveal-edged panels on suspension-system runners, install panels with bottom of reveal in firm contact with top surface of runner flanges.
 - e. For reveal-edged panels on suspension-system members with box-shaped flanges, install panels with reveal surfaces in firm contact with suspension-system surfaces and panel faces flush with bottom face of runners.
2. Coordinate suspension systems grid layout with electrical lighting fixture lay-out and installation.

3.04 CLEANING

- A. After installation, clean soiled or discolored surfaces of acoustical units and exposed suspension members. Comply with manufacturer's recommendations for cleaning and touch-up of minor finish damage.
- B. Adjust all sags and twists which develop in ceiling systems. Remove and replace units which are improperly installed and damaged units which cannot be successfully cleaned and repaired to eliminate evidence of damage.

END OF SECTION

SECTION 09 65 00
RESILIENT FLOORING

PART 1 GENERAL

1.01 WORK INCLUDED

A. Provide resilient flooring as shown and specified. Work includes:

1. Vinyl tile flooring.
2. Rubber tile flooring.
3. Base.
4. Adhesives and accessories to complete the work.

1.02 QUALITY ASSURANCE

A. Provide each type of resilient flooring and base material produced by one manufacturer, including recommended adhesives and leveling compounds.

B. Provide each type resilient flooring and base material from same production run. Colors shall be uniform throughout.

C. Fire Test Performance: Provide materials complying with referenced standard fire tests.

1. ASTM E84 (Tunnel Test): Flame spread less than 75 (Class B).
2. ASTM E162: Flame spread less than 75 (Class B).
3. U.L. 992: Flame propagation index less than 2.0.

D. Reference Standards: Wherever the following abbreviations are used herein, they shall refer to the corresponding standard.

1. ASTM: American Society for Testing and Materials.
2. FS: Federal Specifications as established by the U.S. Government, General Services Administration.
3. U.L.: Underwriter's Laboratories.
4. ADA: Americans with Disabilities Act Accessibility Guidelines.

E. Slip Retardant Performance: Unless a greater performance is specified under a specific product, all floor materials must have a minimum static coefficient of friction of 0.6.

1.03 SUBMITTALS

A. Submit manufacturer's product data and installation instructions for each type of resilient flooring, base and accessory required.

- B. Samples
 - 1. Tiles: Submit full sized samples of each type, color and pattern required to illustrate the full range of color variations.
 - 2. Base: Provide 6" lengths of each type and color.
- C. Submit manufacturer's certification that resilient flooring furnished complies with required fire test performance and has been tested and meets indicated requirements.
- D. Submit manufacturer's written instructions for recommended maintenance practices for each type of resilient flooring, base and accessory material required.
- E. Extra Stock: Furnish extra materials in the following quantities:
 - 1. Tiles and Base: Furnish 2% of the total quantity (but not less than 2 full sealed cartons) of each type, pattern and color. Provide 5% of colors with less than 5000 square feet. Properly package and identify each material.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's original, unopened labeled containers.
- B. Store, protect, and handle resilient flooring materials in accordance with manufacturer's recommendations to prevent damage, soiling and deterioration.
- C. Store materials in areas to receive resilient flooring for a minimum of 48 hours before installation.

1.05 PROJECT CONDITIONS

- A. Maintain uniform room temperature range not less than 70 degrees F., in areas to receive resilient flooring for minimum 48 hours before installation and 48 hours after installation.
- B. Provide adequate lighting and ventilation during installation and clean-up.
- C. Protect adjoining surfaces from damage and soiling.

PART 2 PRODUCTS

2.01 RESILIENT FLOORING MATERIALS

- A. Vinyl Tile: Meets Reference Specification ASTM F1066, Composition 1, Class 2
 - 1. Colors, Patterns and Manufacturers
 - a. Basis of Design: Premium vinyl tile indicated on the drawings manufactured by AMTICO.

- b. Other Acceptable Manufacturers: Vinyl tile manufactured by CENTIVA or ARMSTRONG will be considered if materials meet the requirements of the Basis of Design and the sizes, patterns and colors are an acceptable match as approved by the Architect prior to bid opening. These additionally approved manufacturers will be included by Addendum. An unacceptable pattern or color match is reason for disapproval of product and manufacturer. No substitutions will be considered after bid opening.
- B. Rubber Tile Flooring: Smooth rubber flooring; non-laminated, single ply surface made from multiple colored reprocessed EPDM rubber.
 - 1. Thickness: 1/8"
 - 2. Size: 24" x 24".
 - 3. Manufacturer, Colors and Patterns
 - a. Basis of Design: Colors indicated on the drawings are based on ECO Studio Collection manufactured by ECO SURFACES.
 - b. Other Acceptable Manufacturers: Products manufactured by CAPRI CORK RETIRE COLLECTION or CERES NATURAL FLOORS will be considered if materials meet the requirements of the Basis of Design and the sizes, patterns and colors are an acceptable match as approved by the Architect prior to bid opening. These additionally approved manufacturers will be included by Addendum. An unacceptable pattern or color match is reason for disapproval of product and manufacturer. No substitutions will be considered after bid opening.

2.02 BASE

- A. Vinyl Base: Complying with ASTM F1861, Type TV, Group 1, 4" high, 1/8" gage. Provide long length rolls and job formed corners. Standard top set cove (Style B) at resilient and other hard surface flooring and straight toeless (Style A) at all carpeted floors.
 - 1. Colors and Manufacturers
 - a. Basis of Design: Colors and types indicated on the drawings are manufactured by JOHNSONITE.
 - b. Other Acceptable Manufacturers: Products manufactured by VINYL PLASTIC, INC. (VPI) or ROPPE are acceptable providing they meet the requirements specified herein and are an acceptable color match as approved by the Architect. Color match should be submitted to the Architect during bidding for inclusion by an Addendum.
- B. Vinyl Base, Millwork Type: Thermoplastic rubber formulation designed specifically to meet the performance the performance and dimensional tolerance requirements of ASTM F1861, Type TP, Group 1 (solid) Standard Specification for Resilient Wall Base.
 - 1. Hardness - ASTM D 2240: 85 Shore A

2. Corners: Field miter cut.
3. Colors and Manufacturers
 - a. Basis of Design: Colors and types indicated on the drawings are manufactured by JOHNSONITE.
 - b. Other Acceptable Manufacturers: Products manufactured by VINYL PLASTIC, INC. (VPI) or ROPPE are acceptable providing they meet the requirements specified herein and are an acceptable color and style match as approved by the Architect. Color and style match should be submitted to the Architect during bidding for inclusion by an Addendum.

2.03 ACCESSORIES

- A. Leveling Compound: Non-staining latex modified, Portland cement based type, compatible with flooring, as provided or recommended by the flooring manufacturer.
- B. Adhesives: Waterproof, stabilized type as recommended by the resilient flooring and base manufacturer to suit material and substrate conditions.
- C. Resilient Edge/Transition Strips: Provide rubber or stainless steel transition strips by the following manufacturers.
 1. Resilient-to-Carpet: Rubber. Colors as selected by Architect.
 - a. ROPPE, #56
 - b. JOHNSONITE, CTA-XX-H
 - c. VPI FLOORING, ACC12
 2. Resilient-to-Concrete: Stainless steel
 - a. SCHLUTER Reno U; stainless steel
 - b. GREAT LAKES TILE PRODUCTS; Reducer.
 - c. BLANKE CORP.; Reducer Trim.
 3. Where transition types are required for conditions other than those listed above, provide rubber type from the manufacturers listed to create a smooth transition or termination.
- D. Cleaning Materials: Polish and neutral cleaner as recommended by the floor material manufacturer.
- E. Existing Adhesive Remover: Non-toxic type; similar to De-Sol-It by ORANGE-SOL or equal by NAPIER ENVIRONMENTAL TECHNOLOGIES, INC., or CITRUS KING.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine substrates and installation condition. Do not proceed with resilient flooring work until unsatisfactory conditions have been corrected.

- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.02 PREPARATION

- A. Before installing flooring, vacuum clean substrate surfaces and inspect subfloor to verify that concrete slab complies with ASTM F710.
 - 1. When required, lightly grind concrete subfloors with a terrazzo grinder to remove trowel marks, slab curl at saw cut joints or other surface irregularities or high spots which will telegraph to the flooring surface.
 - 2. Fill cracks, low areas and pits in concrete with self-leveling fill of type recommended by flooring manufacturer for substrate conditions encountered.
 - 3. Perform bond, alkalinity and moisture tests on concrete slabs to determine that concrete surfaces are sufficiently cured and are ready to receive flooring.
 - 4. Moisture Testing
 - a. Perform anhydrous calcium chloride test, ASTM F1869. Proceed with installation only after substrates have a maximum moisture vapor emission rate of 3 lbs. of water/1000 sq. ft. in 24 hours.
 - b. Proceed with installation only after substrates pass testing.

3.03 INSTALLATION

- A. Install resilient flooring and accessories with adhesive in strict compliance with the manufacturer's recommendations. Butt tightly to vertical surfaces, thresholds, nosings and edgings. Scribe around obstructions and to produce neat joints, laid tight, even and straight. Extend flooring into toe spaces, door reveals and into closets and similar openings.
- B. Tile Flooring
 - 1. Lay tile flooring with joints tight, in true alignment and parallel to walls of rooms and corridors.
 - 2. Lay tile symmetrically about centerlines of space, without pattern or borders. Adjust layout to avoid use of cut widths less than one-half tile at room perimeter.
 - 3. Match tile for color by using manufactured and packaged sequence.
 - 4. Broken, cracked, or deformed tiles are not acceptable.
 - 5. Immediately after installation, thoroughly roll tile with a 150 lb. sectional roller until a firm, uniform bond has been obtained.
- C. Base
 - 1. Install at walls, column, casework and other permanent fixtures as scheduled. Install in as long of lengths as practicable. Tightly bond base to backing throughout length of each piece, with continuous contact at horizontal and vertical surfaces.
 - 2. Provide terminal base ends beveled and toes rounded.

3. On masonry surfaces or other similar irregular surface, fill voids along top edge of resilient wall base with manufacturer's recommended adhesive filler material.
- D. Edge Strips: Place tightly butted to flooring and secure with adhesive. Install at edges of flooring which would otherwise be exposed.

3.04 CLEANING AND PROTECTION

- A. Prohibit traffic on floor finish for 48 hours after installation.
- B. After flooring has set, clean thoroughly. Remove excess adhesive or other surface blemishes from flooring, using neutral type cleaners as recommended by the flooring manufacturer.
- C. Perform initial maintenance according to latest edition of manufacturer's maintenance manual and the following:
- D. Protect installed flooring from damage and staining with heavy duty non-staining Kraft paper or other covering at all traffic lanes. Protect completed work from traffic and damage until final acceptance.

END OF SECTION

SECTION 09 68 00

CARPETING

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Carpet, installation and all glue, edge guards, and accessories necessary for the installation.
- B. Work includes preparation of subsurfaces, cleaning, and protection of finished carpet.

1.02 QUALITY ASSURANCE

- A. Installer: Firm with not less than 5 years of carpeting experience similar to work of this Section.
 - 1. Work not in compliance with the manufacturer's recommended standards and procedures shall be promptly corrected at the Contractor's expense.
- B. Manufacturer: Firm (carpet mill) with not less than 5 years of production experience with similar types specified in this section; and whose published product data clearly indicates compliance of product with requirements of this Section.
- C. General Standard: "Carpet Specifiers Handbook" by The Carpet and Rug Institute; for definitions of terminology not otherwise defined herein, and for general recommendations and information.
- D. Fire Performance Characteristics: Provide carpet that is identical to that tested for the following fire performance requirements, according to test method indicated, by UL or other testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Flammability - ASTM D2859: Passing Methanine Pill Test.
 - 2. Critical Radiant Flux - ASTM E684: Not less than 0.45 watts per square centimeter.
 - 3. Smoke Density - ASTM E84: 450 or less.

1.03 REFERENCE STANDARDS

- A. Carpet: Comply with the OBC for flame spread and smoke contribution requirements and tested in accordance with ASTM E84.

1.04 SUBMITTALS

A. Samples

1. Broadloom: Submit 12" x 12" samples of each color and pattern selected.
2. Tiles: Submit full size tiles (samples) of each color and pattern selected.
3. Accessories: 12" long sample of each type exposed edge stripping and accessory item.

B. Product Data: Provide for all items. Include, product data covering carpet construction, physical characteristics, durability, resistance to fading, and flame resistance characteristics.

C. Shop Drawings

1. Broadloom: Submit seam diagram drawings and edge treatments.
2. Tiles: Submit drawings showing layout. Indicate pile or pattern direction and locations and types of edge strips.

D. Certifications: Contractor shall provide the following:

1. Manufacturer: Before carpet materials are ordered, submit 4 copies of test results from a recognized laboratory and 4 copies of a notarized statement, signed by an officer of the manufacturer, confirming that the carpet products proposed for use are those which have passed the required tests indicated under "Performance Standards" for the carpet and comply with the requirements of State and local fire authorities.
2. Installer: Submit 4 copies attesting that materials actually installed were the same as those certified as meeting specified requirements.

1.05 PRODUCT DELIVERY AND STORAGE

A. Deliver carpeting materials in original mill protective wrapping, and store inside protected from weather, moisture and soiling.

B. Investigate and resolve access restrictions, including elevator capacity, entrances and accessibility, to assure proper delivery and installation of materials.

C. Protect materials against damage of any kind. Damaged products, including soiled fabrics, will be rejected.

1.06 MAINTENANCE

A. Manufacturers: Provide three (3) copies of maintenance schedules, describing programmed maintenance procedures, including general maintenance, preventative maintenance, spot removal, traffic lane maintenance and overall cleaning.

- B. Operational Service: Provide manufacturer's take-back program service for carpet installed in project. Service shall reclaim materials for recycling and/or reuse. Service shall not landfill or burn reclaimed materials.

1.07 WARRANTY

- A. Special Project Warranty: Submit a written warranty, executed by the Contractor, Installer and the Manufacturer, agreeing to repair or replace carpeting which fails in materials or workmanship within the specified warranty period. This warranty shall be in addition to and not a limitation of other rights the Owner may have against the Contractor under the Contract Documents.

- 1. Warranty period is two years after date of substantial completion.

- B. Carpet manufacturer's material wear warranty: Ten years.

1.09 EXTRA MATERIALS

- A. Broadloom: Provide quantity of full-width carpet equal to 5 percent of amount installed. In addition, turn over to Owner all usable scraps of carpet. Usable scraps are defined to include roll ends of less than 9 ft. length, and pieces of more than 3 sq. ft. area and more than 8 inches wide.

- B. Tiles: Provide quantity of full tiles for each type of material equal to 5 percent of amount installed.

- C. Deliver extra carpet materials to Owner's designated storage space, properly packaged with protective covering and identified with labels describing contents.

PART 2 PRODUCTS

2.01 CARPET

- A. Manufacturers, Styles and Colors

- 1. Basis of Design: Styles and colors as indicated on the drawings are manufactured by THE MOHAWK GROUP, BIGELOW.
 - 2. Other Acceptable Manufacturers: Carpet manufactured by BENTLEY or SHAW will be considered if materials meet the requirements of the Basis of Design and the sizes, patterns and colors are an acceptable match as approved by the Architect prior to bid opening. These additionally approved manufacturers will be included by Addendum. An unacceptable pattern or color match is reason for disapproval of product and manufacturer. No substitutions will be considered after bid opening.

2.02 ACCESSORIES

- A. Carpet Edge Guard: Non-metallic type. Extruded or molded vinyl or rubber of size and profile indicated. Color as selected by Architect.

- B. Adhesive: Non-toxic, waterproof, white latex base cement formulated for the installation of the manufactured materials. Type as recommended by carpet manufacturer.
- C. Seaming Cement: Hot-melt seaming adhesive or similar product recommended by carpet manufacturer, for taping seams and buttering cut edges at backing to form secure seams and prevent pile loss at seams.
- D. Miscellaneous Materials: As recommended by manufacturer of carpet and other carpeting accessory products; selected by installer to meet project circumstances and requirements.
- E. Leveling Materials and Crack Fill: Non-staining latex cementitious type, compatible with carpet adhesive, as recommended by the flooring manufacturer.

PART 3 EXECUTION

3.01 PRE-INSTALLATION REQUIREMENTS

- A. Installer must examine substrates for moisture content and other conditions under which carpeting is to be installed, and notify Contractor in writing of conditions detrimental to proper completion of the work.
 - 1. Do not proceed until unsatisfactory conditions have been corrected.
- B. Comply with CRI 2011 and with carpet manufacturer's written installation instructions for preparing substrates indicated to receive carpet installation.
- C. Clear away and scrape up cementitious deposits from surfaces to receive carpeting; vacuum clean immediately before installation. Check concrete surfaces to ensure no "dusting" through installed carpet.
 - 1. Apply primer, if recommended by flooring manufacturer, before application of adhesive. Apply in compliance within manufacturer's recommended limits.
- D. When required, lightly grind concrete subfloors with a terrazzo grinder to remove trowel marks, slab curl at saw cut joints or other surface irregularities or high spots which will telegraph to the flooring surface.
- E. Fill cracks and slab depressions with latex fill to provide level even concrete subfloor.
- F. Sequence carpeting with other work so as to minimize possibility of damage and soiling of carpet during remainder of construction period.

3.02 INSTALLATION

- A. Install in accordance with recommendations of the manufacturers of materials and Carpet and Rug Institute's methods specified in CRI 2011.

Carpet manufacturer's current installation instructions shall be kept at job site and be followed explicitly.

1. Comply with manufacturer's recommendations for installation of carpet; maintain uniformity of carpet direction and lay of pile, unless otherwise indicated.
- B. Use modular carpet from the same dye lot in each room.
- C. Lay carpet in accordance with the final shop drawings. No reversing of carpet direction shall be permitted.
- D. Install modular carpet by trimming, cutting and prefitting units. Then apply adhesive in strict accordance with manufacturer's instructions, and place the carpet modules with the pile inclination in the direction as recommended by the manufacturer, or as otherwise indicated on the final layout drawings.
1. Application shall be full spread. Sprayed on adhesive is not permitted.
 2. Install using a notched trowel.]
- E. Trim protruding ends of open loops so slightly below surrounding pile height.
- F. Use edge molding where carpet terminates under doors and along edge of carpet where it abuts another floor material. Fasten edge moldings securely to the floor with glue manufactured for this specific purpose.
- G. Roll entire area lightly to eliminate air pockets and ensure uniform bond.

3.03 CLEANING AND PROTECTION

- A. Protect installed carpet to comply with CRI 2011 and carpet manufacturer recommendations.
- B. Remove debris, sorting pieces to be saved from scraps to be disposed. Keep premises free and clear of waste material in connection with carpet work.
- C. Vacuum carpet using commercial machine with face-beater element. Remove spots and replace carpet where spots cannot be removed.
- D. Advise Contractor of protection methods and materials needed to ensure that carpeting will be without deterioration or damage at time of substantial completion.
- E. Provide adequate protection for adjacent equipment, furnishings and materials.

END OF SECTION

SECTION 09 84 14

SOUND ABSORBING WALL UNITS

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide acoustical wall panel system with all trims and mounting accessories.
 - 1. Provide fabric covered fiberglass type in all other areas.

1.02 QUALITY ASSURANCE

- A. Installation: Performed by an experienced authorized installer approved by acoustical material manufacturer.
- B. Fire Hazard Classification: Provide acoustical materials which have been UL tested, listed and labeled Class 0-25, when tested in accordance with ASTM E84.
- C. Reference Standards: Wherever the following abbreviations are used herein, they shall refer to the corresponding standards.
 - 1. ASTM: American Society for Testing and Materials.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for system specified.
- B. Samples: Submit 12" square acoustical panel samples for each acoustical unit selected.
- C. Certification: Submit manufacturer's certification of acoustical units fire hazard classification rating and performance requirements.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original, unopened protective packaging, with manufacturer's labels indicating brand name, pattern size, thickness and fire rating as applicable, legible and intact.
- B. Store materials in original protective packaging to prevent soiling, physical damage or wetting.

PART 2 PRODUCTS

2.01 FABRIC COVERED TYPE ACOUSTICAL WALL PANELS

- A. Wall Panels
 - 1. Thickness: Nominally 1".
 - 2. Core: Molded 5 to 7 PCF fiberglass.
 - 3. Sizes: As indicated.
 - 4. Edges: Chemically hardened; square.
- B. Panel Finish - Fabric: Factory applied, Class 1 rated material, as per OBC with flame spread 0-25 as determined by ASTM E84.
- C. Mounting: Back mounted with manufacturer's standard hook-and-loop strips, secured to substrate.
- D. Flame Spread Rating: Panels shall have a flame spread rating of 25 or less and smoke-developed rating of 200 or less according to ASTM E84 test, "Surface Burning Characteristics of Building Materials", as substantiated by independent laboratory tests.
- E. Noise Reduction Coefficiency (NRC) - ASTM C423: 0.85.
- F. Sound Absorption
 - 1. 250 Hz: 0.45
 - 2. 500 Hz: 1.02
 - 3. 2000 Hz: 1.12
 - 4. 4000 Hz: 1.01
- G. Manufacturers: MBI PRODUCTS COMPANY, KINETICS NOISE CONTROL, ARMSTRONG, DECOUSTICS or ESSI ACOUSTICAL PRODUCTS COMPANY; meeting the performance requirements specified herein.

PART 3 EXECUTION

3.01 INSPECTION OF SURFACES

- A. Verify that surfaces to receive wall panels are smooth and have no conditions detrimental to successful application of wall panels.
- B. Notify Architect of above referenced conditions.

3.02 INSTALLATION

- A. Install fabric-wrapped wall panels in locations indicated with vertical surfaces and edges plumb, top edges level and in alignment with other panels, faces flush, and scribed to fit adjoining work accurately at borders and at penetrations.

- B. Comply with wall panel manufacturer's written instructions for installation of panels using type of mounting devices indicated. Mount panels securely to supporting substrate.
- C. Align and level fabric pattern and grain among adjacent panels.

3.03 INSTALLATION TOLERANCES

- A. Variation from Plumb and Level: Plus or minus 1/16 inch.
- B. Variation of Panel Joints from Hairline: Not more than 1/16 inch wide.

3.04 CLEANING

- A. Clip loose threads; remove pills and extraneous materials.
- B. Clean panels on completion of installation to remove dust and other foreign materials according to manufacturer's written instructions.

END OF SECTION

SECTION 09 91 00

PAINTING

PART 1 GENERAL

1.01 SCOPE

A. Work Included

1. Surface preparation and painting or finishing of all interior exposed items and surfaces except as otherwise indicated. Work includes, but is not necessarily limited to, the following:
 - a. Walls, ceilings and soffits.
 - b. Hollow metal door (existing) and frames.
 - c. Paint existing surfaces and items where indicated on the drawings and where these surfaces and items are located within areas where new work is being performed.
 - d. Other items noted or specified.
2. Surface preparation, priming and coats of paint specified are in addition to shop priming and surface treatment specified under other sections of the work.

B. Work Excluded: Do not paint the following items unless specifically called for on the drawings or specified herein:

1. Items with factory finish or natural finish.
2. Wall areas permanently concealed by fixed equipment or accessories.
3. Items permanently concealed above ceilings.

C. Surface Preparation

1. It is the intention of this specification that new substrates will be ready for decoration as specified herein except for normal construction dust and soiling.
2. Surfaces and materials installed by other trades are required to be acceptable for work specified under Part 3, Surface Preparation. Specifically, new surfaces to be clean, sound, free from loose particles, dirt, loose mortar and grease.
3. Existing Surfaces: Unless otherwise specified, provide all surface preparation required for decoration.

1.02 DEFINITIONS

- ###### **A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe and duct shafts, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawl spaces, and tunnels.**

- B. Exposed, Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.
- C. Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and in duct shafts.

1.03 QUALITY ASSURANCE

- A. Application: Performed only by skilled, experienced painters.
- B. Provide lead free prime and finish coatings. All top coatings shall be mold and mildew resistant.
- C. Coordination: Provide finish coats compatible with prime paints used. Review other specification sections to ensure compatibility of total coating system with prime paints provided for the various substrates. Provide barrier coats over non-compatible primers or remove primer and reprime as required. Notify the A/E of anticipated problems using coating systems specified on substrates primed in accordance with other section requirements.

1.04 SUBMITTALS

- A. Submit a complete selection of manufacturer's color chips indicating color, texture and sheen for approval for each finish specified herein.
- B. Submit a complete schedule for identifying manufacturer and specific brand name or number of products proposed for finishing specified surfaces.
 - 1. Provide percent of solids by volume content data for each paint material.
 - 2. Provide paint label analysis and application instructions for each type paint.
- C. Provide one (1) unopened gallon of each type and color of paint and stain required for maintenance purposes. Provide original, unopened, labeled containers with color samples and a list of project use. Extra materials are not to be used for touch-up by Contractor.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver all materials on the job site in original, new, unopened packages and containers bearing the manufacturer's name and label, and the following information:
 - 1. Name or title of material.
 - 2. Manufacturer's stock number and date of manufacture.
 - 3. Manufacturer's name.
 - 4. Contents by volume, for major pigment and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.

- B. Store, protect and handle materials in accordance with manufacturer's recommendations to prevent damage and deterioration. Store paint materials at minimum of 50° F.
- C. Maintain paint material storage space as clean, non-hazardous and orderly. Place waste and soiled paint rags in tightly covered metal containers; safely dispose of at end of each working day. Take every precaution to avoid fire hazards and spontaneous combustion. Provide acceptable type of fire extinguisher immediately adjacent to paint storage area.

1.06 PROJECT CONDITIONS

- A. Coordinate painting and finishing work with other trades to ensure adequate illumination, ventilation and dust-free environment during application and drying of paint and finish treatments.
- B. Do not apply coatings when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- C. Provide adequate ventilation as required for specified paint and finish treatment materials in spaces scheduled. Maintain for time periods recommended by material manufacturer to provide proper drying.
- D. Provide adequate illumination on surfaces to be finished. Maintain a minimum 80 foot candle lighting level measured mid-height at substrate surface.
- E. Protect adjoining surfaces against damage or soiling.
- F. Maintain work in neat and orderly condition, promptly removing empty containers, wrappings, soiled rags, waste and rubbish from site.
- G. Material Safety Data Sheets (MSDS): Provide documents available to Owner's Representative and construction personnel at the job site. Comply with MSDS requirements.
- H. See additional scheduling information specified in Section 01 35 13, Special Project Procedures.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Paint: Brands of paint are specified in "Paint and Material Finish Schedule," only to establish a standard of quality. Other paint brands such as BENJAMIN MOORE; AKZO NOBEL (GLIDDEN PROFESSIONAL and DEVOE COATINGS); MARTIN SENOUR; PPG; PRATT AND LAMBERT; PORTER; CORONADO PAINT COMPANY, SHERWIN WILLIAMS are acceptable upon proof of satisfactory experience records for the intended use.

1. Colors: As indicated on drawing; colors not indicated to be as selected by Architect.

2.02 ACCESSORY MATERIAL

- A. Application Equipment: Not required to be new, but shall be adequate for the work and workmanship required herein.
- B. Accessories: Provide all required ladders, scaffolding, drop cloths, masking, scrapers, tools, dusters and cleaning solvents as required to perform the work and achieve the results specified herein.

2.03 INTERIOR PAINT MATERIALS SCHEDULE

- A. Apply paint and finish materials to substrate surfaces indicated. Apply touch-up prime coats in addition to shop-applied prime coats. Provide additional job site prime coats when indicated.
- B. Gypsum Board – Walls (Acrylic Latex System)
 1. SW
 - a. Primer: Pro Green 200 Low VOC Interior Latex Primer B28W00600 Series.
 - b. Finish: ProMar 200 Zero VOC Interior Latex Egg-shell B20 Series Two (2) coats.
 2. PPG
 - a. Primer: SpeedHide Interior Latex Primer 6-2 Series.
 - b. Finish: Pure Performance Interior Eggshell Latex 9-300 Series. Two (2).
 3. GLIDDEN PRO
 - a. Primer: Lifemaster No VOC Interior Primer 9116-1200. One (1) coat.
 - b. Finish: Lifemaster No VOC Interior Latex Eggshell Paint 9300 Series. Two (2) coats.
- C. Gypsum Board – Ceilings/Soffits (Acrylic Latex System)
 1. SW
 - a. Primer: Pro Green 200 Low VOC Interior Latex Primer B28W00600 Series.
 - b. Finish: ProMar 200 Zero VOC Interior Latex Flat B30 Series . Two (2) coats.
 2. PPG
 - a. Primer: SpeedHide Interior Latex Primer 6-2 Series.
 - b. Finish: Pure Performance Interior Flat Latex 9-100 Series. Two (2) coats.
 3. GLIDDEN PRO
 - a. Primer: Lifemaster No VOC Interior Primer 9116-1200. One (1) coat.

- b. Finish: Lifemaster No VOC Interior Latex Flat Paint 9100 Series. Two (2) coats .
- D. Wood - Painted.
 - 1. SW
 - a. Primer: Premium Wall & Wood Primer B28W8111. One (1) coat.
 - b. Finish: ProMar 200 Zero VOC Interior Latex Semi Gloss B31 Series Two (2) coats.
 - 2. PPG
 - a. Primer: Seal Grip Interior/Exterior 100% Acrylic Universal Primer/Sealer 17-921 Series. One (1) coat.
 - b. Finish: Pure Performance Interior Semi-Gloss Latex 9-500 Series. Two (2) coats.
 - 3. GLIDDEN PRO
 - a. Primer: Lifemaster No VOC Interior Primer 9116-1200. One (1) coat.
 - b. Finish: Lifemaster No VOC Interior Latex Semi-Gloss Paint 9200 Series. Two (2) coats.
- E. Metals - Ferrous: Shop Primed and Unprimed. (Acrylic Latex System)
 - 1. SW
 - a. Primer: S-W Pro Industrial Pro-Cryl Primer, B66-310 Series
 - b. Finish: S-W ProMar 200 Zero VOC Interior Latex Semi Gloss B31 Series. Two (2) coats.
 - 2. PPG
 - a. Primer: Pitt-Tech DTM Acrylic Primer 90 Series. One (1) coat.
 - b. Finish: Speedhide Interior Semi-Gloss Enamel, 6-500 Series. Two (2) coats.
 - 3. GLIDDEN PROFESSIONAL
 - a. Primer; Devoe Coatings Devflex 4020PF Direct to Metal Primer/Finish 4020.
 - b. Finish: Lifemaster No VOC Interior Latex Semi-Gloss Paint 9200 Series. Two (2) coats.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine substrate surfaces and installation condition. Report condition(s) that might affect proper application.
- B. Do not proceed with painting work until unsatisfactory conditions have been corrected.
- C. Initial application of paint to a surface constitutes acceptance of existing conditions and responsibility for satisfactory performance.

- D. Examine specification sections of other trades and their provisions regarding painting. Surfaces left unfinished shall be painted or finished as part of the work of this Section unless specifically noted otherwise.

3.02 SURFACE PREPARATION

- A. General
1. Broom clean and remove excess dust before painting is started in any area.
 2. Broom cleaning is not permitted after operations have begun in a specific area.
 3. Surfaces shall be clean, dry and adequately protected from dampness.
 4. Surfaces shall be free of any foreign materials that will adversely affect adhesion or appearance of applied coating.
 5. Remove any mildew and neutralize the surface prior to applying coating.
- B. Existing Surfaces Scheduled for Painting or Finishing
1. Condition, clean, sand, prime, seal and prepare existing surfaces for application of finish materials specified. Provide only finish coats over existing surfaces except where condition of existing surfaces or type of existing surface requires priming and sealing.
 2. Remove loose, blistered, scaled, or crazed finish to bare base material.
 3. At conditions where new work adjoins existing work, prepare existing surface extending to the nearest break in the plane of the surface.
- C. Miscellaneous Ferrous Metal
1. Bare Metal Surfaces
 - a. Remove grease, oil, dirt and other foreign material prior to prime coat application where necessary according to SP-1, SP-2 and/or SP-3.
 - b. Remove rust prior to prime coat application according to SP-11.
 - c. Include all hangers and miscellaneous fabricated items.
 2. Shop Primed Surfaces
 - a. Fill open joints or abrasions in shop prime coat with filler; feather edges, sand smooth, and touch-up with primer compatible with shop primer. Extend primer beyond treated area.
 - b. Remove grease, oil, dirt and other foreign material prior to prime coat touch-up where necessary according to SP-1, SP-2 and/or SP-3.
- D. Gypsum Board
1. Fill minor irregularities with spackling paste.
 2. Sand to smooth level surface and dust off.
 3. Avoid raising nap of paper.
- E. Wood - Painted

1. Prime and backprime interior finish wood products, before their installation, with interior wood prime paint.
 2. Sandpaper to smooth and even surface, dust off.
 3. Countersink nails.
 4. Remove resin with scrapers, sandpaper, mineral spirits or turpentine.
 5. Apply shellac or knot sealer to all knots, pitch and resinous sapwood, allow to dry thoroughly prior to priming.
 6. After priming, putty all nail holes, cracks, open joints and other defects, sand smooth and dust off. Color putty to match primer; if putty is not compatible with finish, spot prime puttied areas.
- F. Factory Primed Items: Verify compatibility between factory applied primer and finish painting system. If compatibility cannot be guaranteed, then provide barrier coat compatible with both finishes.

3.03 APPLICATION

A. General

1. Only skilled mechanics shall be used.
2. Apply all paint in strict accordance with the manufacturer's instructions. Data sheets take precedence over these specifications if more restrictive.
3. Do not apply until preceding coat is dry to manufacturer's recommendations.
4. Do not apply to any surface unless it is thoroughly dry.
5. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes if moisture content of surface is greater than recommended by manufacturer.
6. Do not use material that has exceeded the pot life stated by the manufacturer.
7. Apply to the following workmanship requirements:
 - a. Neat appearance of finished surfaces.
 - b. Absence of ridges, sags, runs, drops, laps, unnecessary brush marks, holidays, air bubbles and excessive roller stipple.
 - c. Thorough mixing of paint and limited use of thinners.
 - d. Uniformity of film thickness.
 - e. Proper drying time between coats.
 - f. Protection of unpainted and finished surfaces.
8. Coverage and hide shall be complete. When color or undercoats show through final coat, recoat until the paint film is of uniform finish, color, appearance, and coverage, at no additional cost to Owner.
9. Edges of paint or finish adjoining other materials or colors shall be sharp and clean without overlapping.

B. Methods

1. Application may be by roller, brush, spray or other approved means.
2. When utilizing spraying, be careful not to use methods which will affect other trades work in adjacent areas.

- C. Mixing
 - 1. Mechanically mix before use.
 - 2. Agitate during application as required.
 - 3. Do not tint or shade in field unless permitted by Architect.

- D. Thinning
 - 1. Dilute only as required to achieve suitable application viscosity.
 - 2. Use only type and amount recommended by manufacturer.

- E. Approvals: Do not apply succeeding coat of paint until previous coat has been inspected and written approval is given.

- F. Protection of Surfaces
 - 1. Provide covers, drop cloths and masking to protect unpainted surfaces previously finish painted. Use special care in protecting electrical and mechanical items which may be damaged by the painting operations (i.e., overspray and solvents that might damage the internals of the item).
 - 2. If possible, remove items not to be painted such as hardware, accessories, electrical plates, lighting fixtures and/or trim, mechanical grilles and louvers and similar items in contact with painted surfaces.
 - 3. Following completion of painting, reinstall removed items by workmen skilled in the trade involved and remove all covers, masking and drop cloths.

END OF SECTION

SECTION 11 31 00

RESIDENTIAL APPLIANCES

PART 1 GENERAL

1.01 WORK INCLUDED

A. Provide appliances where indicated on drawings consisting of:

1. Refrigerator/freezer
2. Range/oven
3. Dishwasher
4. Microwave

1.02 RELATED SECTIONS

A. Electrical Rough-In: Included under Electrical Contract, Division 26.

1.03 SUBMITTALS

A. Manufacturer's Product Data: Submit for all items in accordance with the General Conditions and Section 01 33 23.

PART 2 PRODUCTS

2.01 ITEMS

A. Manufacturers and models listed on the drawings are to establish a standard of acceptable quality. Equal or similar products as approved by the Architect by other manufacturers as follows are acceptable:

1. KENMORE
2. KITCHEN AID
3. WHIRLPOOL
4. GENERAL ELECTRIC
5. MAYTAG
6. FRIGIDAIRE

PART 3 EXECUTION

3.01 INSTALLATION

A. Install all items in accordance with manufacturer's instructions.

B. Provide all required accessories and fasteners to ensure a complete installation.

END OF SECTION

SECTION 12 33 55

PLASTIC LAMINATE FACED CASEWORK

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide plastic laminate casework as indicated on drawings.
- B. Work includes fabrication and installation of standard base and wall cabinet components, shelving, fillers, panels and other units as indicated.
- C. Accessories common to casework are included as work of this section.
- D. Countertops.

1.02 RELATED SECTIONS

- A. Wood Blocking: Section 06 10 50.
- B. Vinyl Base: Section 09 65 00.

1.03 QUALITY ASSURANCE

- A. Fabricator qualifications: A firm specializing in the fabrication of millwork with a satisfactory record of performance on projects of comparable size and quality. Fabricator shall be acceptable to the Architect.
- B. Installation: Performed only by experienced skilled finish carpenters.
- C. Reference Standards: Wherever the following abbreviations are used herein, they shall refer to the corresponding standard:
 - 1. ANSI: American National Standards Institute.
 - 2. AWI: Architectural Woodwork Institute.
 - 3. NEMA: National Electrical Manufacturer's Association.
 - 4. ASTM: American Society for Testing and Materials.
 - 5. CS: Commercial Standard.
- D. Quality Grade: Materials and fabrication shall be "custom grade" in accordance with "Quality Standard Illustrated," of the AWI conforming to the following sections:
 - 1. Section 200: Plywood and particleboard.
 - 2. Section 400: Casework and Tops.
 - 6. Section 1700: Installation of architectural woodwork.

1.04 DEFINITIONS

- A. Exposed Portions of Casework: Include surfaces visible when doors and drawers are closed. Bottoms of casework more than 4 feet above floor and tops less than 6 feet 6 inches above floor shall be considered as exposed. Visible members in open cases or behind glass doors also shall be considered as exposed portions.
- B. Semi-Exposed Portions of Casework: Includes those members behind opaque doors, such as shelves, divisions, interior faces of ends, case back, drawer sides, backs and bottoms, and back face of doors. Tops of casework 6 feet 6 inches or more above floor shall be considered semi-exposed.
- C. Concealed Portions of Casework: Include sleepers, web frames, dust panels, and other surfaces not usually visible after installation.

1.05 SUBMITTALS

- A. Product Data: Submit manufacturer's/fabricator's data and installation instructions for each type of casework unit.
- B. Samples: Submit samples of specified finishes.
- C. Shop Drawings
 - 1. Submit shop drawings for casework showing plans, elevations, ends and cross sections.
 - 2. Show details and location of anchorages and fitting to floors, walls and base.
 - 3. Include layout of units with relation to surrounding walls, doors, windows and other building components.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Protect casework during delivery, storage and handling to prevent damage, soiling and deterioration.
- B. Do not deliver casework until concrete, masonry and other similar wet work has been completed and is thoroughly dry, outside door openings are permanently watertight, exterior windows are glazed and, in case of temperature dropping below 60 degrees F., until temporary heating and ventilating systems are in operation.
- C. Store casework in dry, well-ventilated spaces with constant minimum temperature of 60 degrees F., and maximum relative humidity of 55%.

1.07 PROJECT CONDITIONS

- A. Provide and maintain a constant temperature and humidity before, during and after installation as required to maintain optimum moisture content of installed materials.

- B. Obtain measurements and verify dimensions and details before proceeding with finish carpentry.

1.08 WARRANTY

- A. Plastic laminate faced casework to be guaranteed by manufacturer, and Contractor jointly and severally to the Owner for three years, to be free of defects due to faulty materials, workmanship, or performance.
- B. Warranty not to include damage sustained as a result of abuse, negligence, use beyond that of it's intended function by the Owner, acts of God, or unnatural events or causes beyond the control of the manufacturer.
- C. Include repair and replacement of defective materials and components at no additional cost to the Owner.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Products of the following manufacturers meeting or exceeding the standards specified herein are acceptable:
 - 1. STEVENS INDUSTRIES, INC.
 - 2. LSI CORPORATION
 - 3. TMI SYSTEMS DESIGN CORPORATION
 - 4. MFI, MERCHANDISE FIXTURES, INC.

2.02 MATERIALS

- A. Particle Board (Substrate for Laminate Surfaces): High density industrial grade with a minimum density of 45 pounds per cubic foot and a moisture content between 9% maximum and 6% minimum, meeting or exceeding ANSI A208.1 Grade M-3 or ASTM D1037.
- B. Fiberboard: Uniform, medium density conforming to ANSI A208.2. Maximum moisture content of 8%. Meet the following minimum standards:
 - 1. Internal Bond: 125 psi.
 - 2. Modulus of Rupture: 4,000 psi.
 - 3. Modulus of Elasticity: 400,000 psi.
 - 4. Screw Holding Power: 325 pounds.
 - 5. Density: Minimum 50 pounds per cubic foot.
- C. Hardboard: Tempered, smooth both sides; conforming to ANSI/AHA A135.4 Class 1.
- D. Lumber: Optional framing material for concealed framing. Conform to AWI requirements premium grade; provide in suitable species of manufacturer's option.

- E. Plastic Laminate: Conform to the requirements of the National Electrical Manufacturer's Association (NEMA) Publication Number LD-3. Plastic laminate shall be WILSONART, FORMICA, PIONITE, or NEVAMAR. Colors as indicated on the drawings.
1. General Purpose Horizontal Grade: 0.05 inches thick.
 2. General Purpose Vertical Grade: 0.028 inches thick.
 3. Backing Sheet Grade: 0.02 inches thick.
 4. Cabinet Liner: 0.02 inches thick.
- F. Pressure Fused Laminate/Interior Surfacing
1. Melamine resin impregnated, 100 gram PSM minimum, surface laminated to core under pressure.
 2. Meet NEMA LD3.1-1991 GP28 standards and NEMA LD3 CL20 standards.
 3. White pressure fused laminate for cabinet interiors behind door and drawers, interiors of all open cabinets unless otherwise specified, and underside of wall cabinet unless otherwise specified.
 4. Shall be balanced at all concealed surfaces with phenolic backer. Unsurfaced coreboard not allowed.
- G. Hardware Items: All exposed hardware to be satin stainless steel finish.
1. Drawer Slides: Self-closing, side mounting type with nylon tire, steel ball-bearing rollers. Manufactured by BLUM, GRASS, AMEROCK, KNAPE & VOGT; ACCURIDE. Load capacity as follows:
 - a. 75 pounds: Drawers up to 3-1/2 inches deep: Similar to ACCURIDE Series 2132.
 - b. 100 pounds: Drawers up to 8 inches deep: Similar to ACCURIDE Series 2832.
 2. Concealed Hinges: European style, self-closing, type as required for construction. Metallamet by HAFELE; similar by GRASS; PRAMETE; BLUM.
 3. Drawer and Door Pulls: Wire pull, 5/16" diameter x 3-1/3" long x 1-5/16" extension. STANLEY, GRASS; BLUM, HAFELE.
 4. Adjustable Cabinet Shelf Supports: Provide metal pilaster type or hardwood drilled type, manufacturer's standard.
 - a. Metal Type: KNAPE & VOGT (KV) steel nickel plated.
 - 1) Standards: KV #255 NP for dado installation.
 - 2) Clips: KV #256 NP.
 - b. Wood Type: Provide hardwood verticals with adjustment holes located 1/2" on center. Provide shelf clips of type that locks shelf in place.
 5. Catches: Magnetic, STANLEY #45 or equal by NATIONAL LOCK or EPCO.
- H. Glue: Waterproof adhesive (phenol, resorcinol or melamine) base meeting requirements of CS 253 for "Wet Use" unless otherwise specified in specific sections.

- I. Plywood: Birch hardwood plywood conforming to AWI Section 200 for veneer core material, AWI "custom" grade, provide with waterproof glue.
- J. Softwood Plywood: Thickness as indicated.
 - 1. Concealed Use: APA-BB-EXPOSURE I, with exterior glue.
 - 2. Comply with PS-1, "Construction and Industrial Plywood".

2.03 FABRICATION - CASEWORK

- A. General: Except as specified hereinafter, fabricate all work in accordance with AWI quality standards as specified. Work not specified with a level of quality shall be not less than "Custom" quality per AWI.
 - 1. Provide complete factory-fabricated and finished components which, when assembled on site, will provide an integral system of storage and work surfaces.
 - 2. Provide locks where indicated.
 - 3. Make cut-outs and other provisions for the work of other trades and as indicated or required for installation.
 - 4. Assemble cabinets with accurate router grooves 1/8" deep with glue and nails and screws.
 - 5. Apply plastic laminate to exposed ends after assembly to conceal screws in end cabinet.
 - 6. All particle board panels to be balanced construction.
- B. Subbases: Provide continuous plywood closed bases capable of being leveled to meet site conditions; subbase to be unfinished to receive resilient base. See Section 09 65 00.
- C. Base Cabinets
 - 1. Sides and Bottoms: Construct of 3/4" thick particle board with interior of cabinet finished with cabinet liner or polyester laminate. Provide balanced constructed panels with neutral colored backer sheet at concealed conditions and finish laminate at exposed conditions.
 - 2. Backs: Standard 1/4" prefinished hardboard. Install in housed joints in surrounding panels. All backs exposed to view to be neutral colored except where indicated to match vertical color surfaces.
Rear, unexposed side of backs to receive continuous hot melt glue at joint between back and sides/top/bottom for sealing against moisture and vermin, and to further contribute to cabinet stability.
 - 3. Frame: Provide frame construction of 3/4" thick particle board or lumber dadoed into sides at the following:
 - a. As sub-top.
 - b. At all locked drawers and doors.
 - 4. Runners: Provide runners or frame construction between all drawers.
 - 5. Shelves: Provide fixed and adjustable shelves with particle board core where indicated on drawings. Provide shelves adjustable on 1/2" centers.

Except for exposed shelving conditions, finish shelves with neutral colored polyester laminate or liner grade laminate.

Finish front and rear edges with PVC "T" edge.

- a. Shelves under 36" wide: 3/4" thick, except all open shelves to be 1" thick.
- b. Shelves 36" to 42" wide: 1" thick.
- c. Shelves over 42" wide: Construct in accordance with AWI Section 400 to support minimum 30 lbs./running foot of shelf with deflection limited to 1/4" or provide intermediate supports to limit the span to ranges specified above.

6. Finish

- a. Casework Edges: Except where cabinet design requires matching laminate edges and/or "T" edge, finish front edges of sides, frames, and bottom with PVC sheet, black, gray or neutral colored as approved by Architect.
- b. Exposed Exterior of Casework: Finish exposed portion of cabinet with vertical grade plastic laminate in solid color finish as selected by Architect.
- c. Interior of Casework
 - 1) Semi-Concealed (behind doors): Neutral colored polyester or cabinet liner laminate.
 - 2) Exposed: Vertical grade laminate to match exposed casework.
- d. Shelves: Same as specified for interior of casework. "T" edge typical except where cabinet design requires matching laminate self edge.

D. Drawers

1. Body: Construct of fiberboard with polyester laminate finish on faces and PVC on exposed top edges. Subfronts, sides and back fabricated with shouldered lock joint or dado construction and routed to receive bottom.
 - a. Sides and Back: 1/2" thick.
 - b. Subfront: 5/8" thick.
2. Bottom: 1/4" thick prefinished hardboard, housed and glued, into front, sides and back. Underside of drawer to receive continuous hot melt glue at joint between bottom and back/sides/front for sealing and rigidity. Reinforce drawer bottoms as required with intermediate spreaders.
3. Front: 3/4" thick particle board front finished with vertical grade plastic laminate on exposed face and cabinet liner laminate on interior side; total thickness 13/16" thick. Except where cabinet design requires self edge matching laminate edges (see cabinet design), edges to be finished with PVC "T" edging, black, gray or neutral color as selected by Architect; corners rounded.
 - a. Where adjacent door sizes require core thickness in excess of 3/4", provide drawer fronts to match door thickness. Verify conditions with Architect.
4. Install on proper sized slides specified herein.

- E. Doors: Construct and finish same as drawer fronts except core construction to vary as follows:

1. Doors over 30" x 48": Construct from 1" to 1-1/4" thick particle board core.
 2. Doors over 36" x 60": Construct as 1-3/8" thick hollow core units in accordance with AWI Section 1300.
- F. Wall Cabinets: Construct and finish same as base cabinets except provide suitable hang rail of 3/4" plywood secured to cabinet frame.
1. Where wall cabinets close to soffit or ceiling, provide fascia scribed to conditions and leveled on bottom to permit level installation of cabinets. Finish of fascia to match cabinet.
- G. Design
1. Configuration of casework is indicated on drawings.
 2. The detailing and design required to provide rigid, solid and structurally adequate casework is the responsibility of the fabricator; within parameters of AWI specifications and as approved by Architect.
 3. The following conditions require special attention:
 - a. Casework exceeding 42" in width between supports.
 - b. Sink and/or equipment cutouts and supports.
 - c. Countertops exceeding 24" unsupported.
 - d. Wall and Ceiling Mounted Casework: Provide integral framing in casework of size, strength, and in locations which allow unit to be screw attached to proper substrate and remain rigidly in place.

2.04 COUNTERTOPS

- A. Plastic Laminate Countertops and Window Stools
1. Quality Standard: Conform to AWI, Section 400 and Division 400C for "Custom" quality.
 2. Top Core: Construct tops of 3/4" thick particle board core typical; provide plywood at counters with sinks and other locations where indicated on drawings.
 - a. Where double layers indicated, glue together to form monolithic 1-1/2" thick panel.
 3. Splashes: Provide with minimum 1/4" scribe typical.
 - a. Provide straight splashes where shown; permanently attached to top.
 - b. Seal: Prior to permanent attachment of straight splashes to top, seal all joints by setting in continuous bead of clear silicone sealant.
 4. Exposed Edges: Build exposed edges to 1-1/2" thick at overhang by attaching continuous strip of core material to bottom side of top.
 5. Joints in core, if required, to be fitted with mechanical panel fasteners; spacing not to exceed 12" apart nor more than 3" from outside corners.
 6. Finishes: Finish tops, splashes and edges with plastic laminate as follows:
 - a. General purpose grade
 - b. Balance underside of tops with backing sheets, 0.020".
 - c. Finish bottom of all overhangs with laminate.

PART 3 EXECUTION

3.01 CASEWORK INSTALLATION

A. General

1. Install plumb, level, true and straight with no distortions so that doors and drawers will fit openings properly and be accurately aligned.
2. Shim as required using concealed shims.
3. Where casework abuts other finished work, scribe and apply filler strips for accurate fit with concealed fasteners.
4. Where possible, assemble units into one integral unit with joints flush, tight and uniform. Align similar adjoining doors and drawers to a tolerance of 1/16".
5. Anchor cabinet units securely in place with concealed (when doors and drawers are closed) fasteners, anchored into structural support members of wall construction. Comply with manufacturer's instructions and recommendations for support of unit.
6. Adjust casework and hardware so that doors and drawers are centered in openings and operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

B. Base Cabinets

1. Fasten each individual cabinet to floor at toe space, with fasteners spaced at 24" on center.
2. Bolt continuous cabinets together.
3. Secure individual cabinets with not less than 2 fasteners into floor, where they do not adjoin other cabinets.

C. Wall Cabinets

1. Verify that wood blocking has been installed at required locations.
2. Bolt continuous cabinets together.
3. Secure individual cabinets with not less than 2 fasteners into wall (wood blocking), where they do not adjoin other cabinets.

- D. Install countertops level, true to alignment, accurately fit to wall conditions and securely fastened to base units and other support systems as indicated.**

3.02 CLEANING AND PROTECTION

A. Repair or remove and replace defective work as directed upon completion of installation.

1. Patch surfaces damaged by installation to prior condition as approved or replace damaged units as directed.

- B. Clean shop-finished surfaces, touch-up as required, and remove or refinish damaged or soiled areas, as acceptable to Architect.
 - 1. Dust cabinet interiors. Clean exterior surfaces to original condition.
- C. Advise Contractor of procedures and precautions for protection of materials and installed casework from damage by work of other trades.

END OF SECTION

