PROJECT MANUAL

Interior Renovations for:
Bay Arenac ISD
Living and Learning Center
1435 W. Center Rd.
Essexville, MI 48732.

Prepared For: **Bay Arenac ISD**
4228 Bay-Arenac Dr.
Bay City, MI 48706

Prepared By:

TSSF ARCHITECTS, INC.
ARCHITECTS PLANNERS
122 N. WASHINGTON AVENUE SAGINAW, MICHIGAN

Project Number: **2613**

Date: **BID SET MAY 11, 2026**

SECTION 00010
PROJECT INFORMATION

PART 1 GENERAL

1.01 PROJECT IDENTIFICATION

A. Project Name: Bay Arenac ISD Living and Learning Center, located at: 1435 W. Center Rd., Essexville, MI 48732.

B. Architect's Project Number: 2613

C. The Owner, hereinafter referred to as Owner: Bay Arenac ISD

D. Owner's Project Manager: Ken Kerr.
   1. Department: Supervisor, Building Operations.
   2. Address: 4155 Monitor Rd..
   3. City, State, Zip: Bay City, MI 48706.
   4. Phone/Fax: 989-667-3619.
   5. E-mail: kerrk@baisd.net.

1.02 PROJECT DESCRIPTION

A. Summary Project Description: Interior renovations.

B. Contract Scope: Construction and demolition.

C. Contract Terms: Lump sum (fixed price, stipulated sum).

1.03 PROJECT CONSULTANTS

A. The Architect, hereinafter referred to as Architect: TSSF Architects Inc..
   1. Address: 122 N. Washington Ave.
   2. City, State, Zip: Saginaw, MI 48607.
   3. Phone/Fax: 989-752-7311.
   4. E-mail: chris@tssfinc.com.

1.04 PROCUREMENT TIMETABLE

A. The Owner reserves the right to change the schedule or terminate the entire procurement process at any time.

1.05 PROCUREMENT DOCUMENTS

A. Availability of Documents: Complete sets of procurement documents may be obtained:
   1. From Owner at the Project Manager's address listed above.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

DOCUMENT 00011

TABLE OF CONTENTS

INTERIOR RENOVATIONS FOR BAY ARENAC LIVING AND LEARNING CENTER

DIVISION 9 – FINISHES

09211 Gypsum Board Assemblies
09510 Acoustical Ceilings
09650 Resilient Flooring
09900 Paints and Coatings

DIVISION 10 – SPECIALITIES

10800 Toilet, Bath, and Lavatory Accessories

DIVISION 11 – EQUIPMENT
NOT USED

DIVISION 12 – FURNISHINGS
NOT USED

DIVISION 13 – SPECIAL CONSTRUCTION
NOT USED

DIVISION 14 – CONVEYING SYSTEMS
NOT USED

DIVISION 15 – MECHANICAL – SEE DRAWINGS

DIVISION 16 – ELECTRICAL – SEE DRAWINGS

END OF SECTION

SECTION 00015
LIST OF DRAWING SHEETS

T1.0- COVER SHEET

ARCHITECTURAL
A0.2 – GENERAL INFORMATION SHEET
A0.3 – GENERAL INFORMATION SHEET
A0.4 – GENERAL INFORMATION SHEET
D2.0 - DEMOLITION PLAN
A2.0 – FLOOR PLAN
A9.0 – REFLECTED CEILING PLAN

MECHANICAL
M0.0 – SPECIFICATIONS
M1.0 – PARTIAL HVAC PLANS

PLUMBING
P0.0 – SPECIFICATIONS
P1.0 – PARTIAL PLUMBING PLANS

ELECTRICAL
E0.0 – ELECTRICAL SPECIFICATIONS AND NOTES
E2.0 – ELECTRICLA POWER PLANS
E3.0 – ELECTRICAL LIGHTING PLANS
E5.0 – ELECTRICAL PANEL SCHEDULES AND DETAIL
E5.0 – ELECTRICAL RISER DIAGRAM

END OF SECTION

SECTION 00150
ADVERTISEMENT FOR BIDS

FROM:

1.01 THE OWNER (HEREINAFTER REFERRED TO AS OWNER):

A. Bay Arenac ISD

B. Address:
1435 W. Center Rd.
Essexville, MI, 48732

1.02 AND THE ARCHITECT (HEREINAFTER REFERRED TO AS ARCHITECT):

A. TSSF Architects Inc.

B. Address:
122 N. Washington Ave.
Saginaw, MI 48607

1.03 DATE: MAY 11, 2026

1.04 TO: POTENTIAL BIDDERS

A. Your firm is invited to submit an offer under seal to Owner for the Living and Learning Center Interior Renovations in a facility located at the above address before 1:00 pm local standard time on the 28th day of May, 2026, for:

B. Project: Bay Arenac ISD Living and Learning Center Interior Renovations

C. Architect's Project Number: 2613.

D. All bidders are required to prequalify to the requirements described in Document 00300 - Instructions to Bidders.

E. Documents may be obtained only by General Contract. Others may view the Bid Documents at the office of the Architect.

F. Bidders will be required to provide Bid security in the form of a Bid Bond of a sum no less than 5 percent of the Bid Amount.

G. Refer to other bidding requirements described in Document 00300 - Instructions to Bidders.

H. Submit your offer on the Bid Form provided. Bidders may supplement this form as appropriate.

I. Your offer will be required to be submitted under a condition of irrevocability for a period of 30 days after submission.

J. The Owner reserves the right to accept or reject any or all offers.

END OF SECTION

SECTION 00300
INSTRUCTIONS TO BIDDERS

SUMMARY

1.01 SEE AIA A701, INSTRUCTIONS TO BIDDERS AVAILABLE AT THE OFFICE OF THE ARCHITECT.

1.02 RELATED DOCUMENTS

A. Document 00150 - Advertisement for Bids.

B. Document 00400 - Bid Form.

INVITATION

2.01 BID SUBMISSION

A. Bids signed and under seal, executed, and dated will be received at the office of the Owner at 4228 Bay-Arenac Dr. Bay City, MI 48706 at the Administration Building Front Desk before 1:00 p.m. local standard time on 05/28/2025.

B. Offers submitted after the above time will be returned to the bidder unopened.

C. Along with the Bids, the Familiar Disclosure Form, Assurances and Certifications, and Affidavit of Compliance – Iran Economic Sanctions Act should be signed and completed with the submittal. These formas are behind the Bid Form section 00500 in the specifications.

2.02 WAGE RATES

A. Bay County Prevailing wage requirements are required on this project. Submission of weekly payroll with statement of compliance with original signature during the project are encouraged.

2.03 CONTRACT TIME

A. Identify Contract Time in the Bid Form. The completion date in the Agreement shall be the Contract Time added to the commencement date.

BID DOCUMENTS AND CONTRACT DOCUMENTS

3.01 INQUIRIES/ADDENDA

A. Direct questions to Chris Bohinski, email; chris@tssfinc.com.

B. Addenda may be issued during the bidding period. All Addenda become part of Contract Documents. Include resultant costs in the Bid Amount.

C. Verbal answers are not binding on any party.

SITE ASSESSMENT

4.01 SITE EXAMINATION

A. Examine the project site before submitting a bid.

4.02 PREBID CONFERENCE

A. A mandatory bidders conference has been scheduled for 2:30 p.m. on 05/18/2026 at the location of 1435 W. Center Rd. Essexville, MI 48732. Visitors should meet near the gated playground around the back of the building.

BID ENCLOSURES/REQUIREMENTS

5.01 SECURITY DEPOSIT

A. Bids shall be accompanied by a security deposit as follows:
   1. Bid Bond of a sum no less than 5 percent of the Bid Amount on AIA A310 Bid Bond Form.

B. Endorse the Bid Bond in the name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.

C. The security deposit will be returned after delivery to the Owner of the required Performance and Payment Bond(s) by the accepted bidder.

D. Include the cost of bid security in the Bid Amount.

E. If no contract is awarded, all security deposits will be returned.

OFFER ACCEPTANCE/REJECTION

6.01 DURATION OF OFFER

A. Bids shall remain open to acceptance and shall be irrevocable for a period of sixty (60) days after the bid closing date.

6.02 ACCEPTANCE OF OFFER

A. Owner reserves the right to accept or reject any or all offers.

B. After acceptance by Owner, Architect on behalf of Owner, will issue to the successful bidder, a written Bid Acceptance.

END OF SECTION

SECTION 00400
BID FORM

THE PROJECT AND THE PARTIES

1.01 TO:

A. Bay Arenac ISD
Ken Kerr
4228 Bay-Arenac Dr.
Bay City, Michigan 48706

1.02 FOR:

A. Project: Interior Renovations for Bay Arenac ISD Living & Learning Center

1.03 DATE: _____ (BIDDER TO ENTER DATE)

1.04 SUBMITTED BY: (BIDDER TO ENTER NAME AND ADDRESS)

A. Bidder's Full Name _____
1. Address _____
2. City, State, Zip_____

1.05 OFFER

A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Bid Documents prepared by _____ for the above-mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:

_____ dollars
($_____), in lawful money of the United States of America.

B. We have included the required security deposit as required by the Instruction to Bidders.

C. We have included the required performance assurance bonds in the Bid Amount as required by the Instructions to Bidders.

D. All applicable federal taxes are included and State of _____ taxes are included in the Bid Sum.

E. All Cash and Contingency Allowances described in Section 01210 - Allowances are included in the Bid Sum.

F. Deductive Alternate No. 1 Owner provided walls and doors removed from base bid.
_____Dollars

(Bid in Words)

$_____

(Bid in Figures)

1.06 ACCEPTANCE

A. This offer shall be open to acceptance and is irrevocable for thirty days from the bid closing date.

B. If this bid is accepted by Owner within the time period stated above, we will:
1. Execute the Agreement within seven days of receipt of Notice of Award.

1.07 CONTRACT TIME

A. If this Bid is accepted, we will:

B. Complete the Work in _____ calendar weeks from Notice to Proceed. (Bidder to enter number of weeks.)

1.08 CHANGES TO THE WORK

A. When Architect establishes that the method of valuation for Changes in the Work will be net cost plus a percentage fee in accordance with General Conditions, our percentage fee will be:
   1. _____ percent on the cost of work done by any Subcontractor.

B. On work deleted from the Contract, our credit to Owner shall be Architect-approved net cost plus _____ of the overhead and profit percentage noted above.

1.09 ADDENDA

A. The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.
   1. Addendum # _____ Dated _____.
   2. Addendum # _____ Dated _____.

1.10 BID FORM SIGNATURE(S)

A. The Corporate Seal of

B. _____

(Bidder - print the full name of your firm)

C. was hereunto affixed in the presence of:

D. _____

(Authorized signing officer, Title)

E. (Seal)

_____

F. (Authorized signing officer, Title)

END OF SECTION

Familial Disclosure Form

The undersigned, the owner or authorized officer of _____ (the "Proposer"), pursuant to the familial disclosure requirement provided in the Bay-Arenac Intermediate School District Request of Proposals and Specifications, hereby represent and warrant, except as provided below, that no familial relationship exist between bidder(s) or any employee of BAISD, and any member of the Board of Education of the School District or the Superintendent of the Schools or the LEAs listed in the Request for Proposal.

List any Familial Relationships:

_____

_____

_____

Dated: _____ PROPOSER: _____

By: _____

Its: _____

State of Michigan)
County of _____)ss:

This instrument was acknowledged before me on the _____ day of _____, 20__, by _____.

_____(Signature)
_____(Printed)
Notary Public, _____ County, Michigan
My Commission Expires: _____
Acting in the County of _____

Assurances and Certifications

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion

The prospective contractor certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded for from participating in this transaction by any Federal department of agency. Where the prospective contractor is unable to certify to any of the statements in this certification, such prospective contractor shall attach an explanation to this proposal.

Certification Regarding Nondiscrimination Under Federally and State Assisted Programs

The applicant herby agrees that it will comply with all federal and Michigan laws and regulations prohibiting discrimination and, in accordance therewith, no person, on the basis of race, color, religion, national origin or ancestry, age, sex, marital status or handicap, shall be discriminated against, excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination in any program or activity for which it is responsible or for which it receives financial assistance from the U.S. Department of Education or the MDE.

Assurance Regarding Access to Records and Financial Statements

The applicant hereby assures that it will provide the pass-through entity, i.e., Bay-Arenac ISD, and auditors with access to the records and financial statements as necessary for the pass-through entity to comply with Section 400 (d) (4) of the U.S. Department of Education Compliance Supplement for A-133.

Iran Economic Sanctions Act

The prospective contractor certifies that its organization, by submission of this proposal, is not an Iran Linked Business. Please refer to the "Iran Economic Sanction Act" Public Act 517 for clarifications or questions. Bay-Arenac ISD as a Michigan public entity is required to follow Public Act 517 of 2012.

Dated: _____ PROPOSER: _____

By: _____

Its: _____

State of Michigan)
County of _____)ss:

This instrument was acknowledged before me on the _____ day of _____, 20__, by _____.

_____(Signature)
_____(Printed)
Notary Public, _____ County, Michigan
My Commission Expires: _____
Acting in the County of _____

Affidavit of Compliance – Iran Economic Sanctions Act

All Bids shall be accompanied by a sworn statement disclosing any Iran Linked Business relationship that exists within the owners, including its officers, director, and employees.

The undersigned, the owner or authorized officer of _____ (the "Bidder"), pursuant to Michigan Public Act No . 517 of 2012, the "Iran Linked Business" requirement provided in the BAISD Consortium Universal Service Fund Request for Proposals hereby represents and warrants that the bidder, including its officers, directors and employees, is not and " Iran Linked Business" within the meaning of the applicable Public Act, and that in the event bidder is awarded a contract as a result of this RFP, the contract. The bidder further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than $250,000 or 2 times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the District investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on future Requests for Proposals (RFPs) for three (3) years from the date that it is determined that the person has submitted the false certification.

There is not an "Iran Linked Business" that exists within the bidder and/or owner, officers, directors and employees.

Bidder: _____
(Company Name)

By: _____
(Signature)

Its: _____
(Title)

This instrument was acknowledged before me, a Notary Public, in and for

_____ County, on this _____ day of _____ 20_____

_____ SS:
(Notary Public Signature)

My commission Expires: _____

Acting in the County of: _____

SECTION 00610

PERFORMANCE, LABOR, AND MATERIAL BONDS

PART 1 GENERAL

1.1 BONDS REQUIRED

A. The successful Contractor, shall within fifteen (15) days after acceptance of his proposal, furnish a Performance Bond, in an amount equal to one hundred percent (100%) of the contract sum as security for the faithful performance of this contract and also a Labor and Material Payment Bond in an amount not less than one hundred percent (100%) of the contract sum as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract.

B. Cost of said bonds shall be included as a part of the Base Bid.

C. The Contractor shall obtain such bonds in a manner consistent with Michigan law.

D. Bonds signed by Attorney-In-Fact must be accompanied by a certified and effectively dated copy of their Power of Attorney.

1.2 RELATED SECTIONS

A. Section 00500 - Agreement Between Owner and Contractor

B. Section 00700 - General Conditions of the Contract

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 00720

GENERAL CONDITIONS

FORM OF GENERAL CONDITIONS

2.01 THE 2017 EDITION OF THE AIA GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (AIA DOCUMENT A-201), IS HEREBY MADE A PART OF THIS CONTRACT AND SHALL BE AS FULLY BINDING ON ALL CONTRACTORS AND SUBCONTRACTORS AS IF BOUND HEREIN.

2.02 THIS DOCUMENT MAY BE INSPECTED AT THE OFFICE OF THE ARCHITECT.

CONTRACTOR RESPONSIBILITY

4.01 PRIOR TO THE BEGINNING OF CONSTRUCTION, THE GENERAL CONTRACTOR SHALL ACQUAINT EACH CONTRACTOR, SUBCONTRACTOR, SUPERINTENDENT OF CONSTRUCTION, FOREMAN, WORKMAN, SUPPLIER, OR OTHERS WHO ARE OR WILL BE RESPONSIBLE FOR THE EXECUTION OF ANY TRADE UNDER THIS CONTRACT WITH ALL PROVISIONS OF THE CONDITIONS OF THE CONTRACT (GENERAL, AND OTHER CONDITIONS), THE DRAWINGS, THE SPECIFICATIONS, ALL ADDENDA ISSUED PRIOR TO BID, AND ALL MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT.

END OF SECTION

SECTION 01200
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedures for preparation and submittal of applications for progress payments.

1.02 SCHEDULE OF VALUES

A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.

B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.

C. Forms filled out by hand will not be accepted.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

A. Payment Period: Submit at intervals stipulated in the Agreement.

B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.

C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.

D. Forms filled out by hand will not be accepted.

E. For each item, provide a column for listing each of the following:

1. Item Number.
2. Description of work.
3. Scheduled Values.
4. Previous Applications.
5. Work in Place and Stored Materials under this Application.
6. Authorized Change Orders.
7. Total Completed and Stored to Date of Application.
8. Balance to Finish.
9. Retainage.

F. Execute certification by signature of authorized officer.

G. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.

H. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.

I. Submit one electronic copy of the Application for Payment.

1.04 MODIFICATION PROCEDURES

A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.

B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.

1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.

2. Promptly execute the change.

C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 5 days.

D. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation.

E. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.

F. Substantiation of Costs: Provide full information required for evaluation.

G. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

1.05 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

B. Application for Final Payment will not be considered until the following have been accomplished:

1. All closeout procedures specified in Section 01700.

END OF SECTION

SECTION 01210
ALLOWANCES AND ALTERNATES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Contingency allowance.

1.02 CONTINGENCY ALLOWANCE

A. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Contingency Allowance.

B. Funds will be drawn from the Contingency Allowance only by Change Order.

C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

1.03 ALLOWANCES SCHEDULE

A. Contingency Allowance: Include the stipulated sum/price of $2,500.00 for use upon Owner's instructions.

1.04 ALTERNATES

A. DEDUCTIVE ALTERNATE NO. 1: This alternate contemplates the owner providing demountable partitions and doors in lieu of the gypsum board walls and hollow metal doors and frames for Offices 103, 104 and 105. Please provide deduct for removal of walls and doors.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01700
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.

B. Cutting and patching.

C. Surveying for laying out the work.

D. Cleaning and protection.

E. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

F. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

A. Section 078400 - Firestopping.

1.03 QUALIFICATIONS

A. For surveying work, employ a land surveyor registered in the State in which the Project is located and acceptable to Architect. Submit evidence of surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities,

B. For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

1.04 PROJECT CONDITIONS

A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

B. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

A. New Materials: As specified in product sections; match existing products and work for patching and extending work.

B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

C. Product Substitution: For any proposed change in materials, submit request for substitution.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 LAYING OUT THE WORK

A. Verify locations of survey control points prior to starting work.

B. Promptly notify Architect of any discrepancies discovered.

C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

D. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

E. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.

F. Utilize recognized engineering survey practices.

G. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:

1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.

2. Grid or axis for structures.

3. Building foundation, column locations, ground floor elevations.

H. Periodically verify layouts by same means.

I. Maintain a complete and accurate log of control and survey work as it progresses.

3.04 GENERAL INSTALLATION REQUIREMENTS

A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.05 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. Perform whatever cutting and patching is necessary to:

1. Complete the work.

2. Fit products together to integrate with other work.

3. Provide openings for penetration of mechanical, electrical, and other services.

4. Match work that has been cut to adjacent work.

5. Repair areas adjacent to cuts to required condition.

6. Repair new work damaged by subsequent work.

7. Remove samples of installed work for testing when requested.

8. Remove and replace defective and non-complying work.

C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

F. Restore work with new products in accordance with requirements of Contract Documents.

G. Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 078400, to full thickness of the penetrated element.

I. Patching:

1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

2. Match color, texture, and appearance.

3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.06 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.07 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.08 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.09 FINAL CLEANING

A. Use cleaning materials that are nonhazardous.

B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

E. Clean filters of operating equipment.

F. Clean site; sweep paved areas, rake clean landscaped surfaces.

G. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.10 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities.

1. Provide copies to Architect and Owner.

B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.

C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.

D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.

E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.

F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

G. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.

H. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

3.11 MAINTENANCE

A. Provide service and maintenance of components indicated in specification sections.

B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.

C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.

E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

END OF SECTION

SECTION 02410
MINOR DEMOLITION FOR REMODELING

PART 1 GENERAL

1.1 SUMMARY

A. This work includes the demolition and removal of building and structures, site improvements adjacent to a building or structure to be demolished, removal of below-grade improvements, and disconnection, capping or sealing, and removal of utilities and equipment adjacent to building.

Work includes, but is not limited to, furnishing all labor, materials, appliances, equipment, and incidentals necessary to complete the following:

* Complete demolition and removal of existing building(s), foundations, pads, and sidewalks adjacent to building.
* Disconnection of utility services in accordance with requirements of agency having jurisdiction of each utility.
* Other demolition, excavation and removals as required to accommodate the Work.

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or recycled.

B. Remove and Salvage: Detach items from existing construction and deliver them to Owner ready for use.

C. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed, and salvaged, or recycled.

1.3 SUBMITTALS

A. Qualification Data: For demolition firm.

B. Proposed Environmental Protection, Dust Control, and Noise Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate. Control the spread of dust and avoid the creation of a nuisance in the surrounding area. Do not use water if it results in hazardous or objectionable conditions, such as ice, flooding, or pollution. Comply with all dust regulations imposed by local air pollution agencies.

C. Submit proposed salvage, demolition, and removal procedures to the Owner and Owner's Representative before Work is started. Comply with the requirements of Section 017419 – Construction Waste Management and Disposal. Procedures will provide for careful removal and disposition of materials specified to be salvaged, coordination with other work in progress, a disconnection schedule of utilities, a detailed description of methods and equipment to be used for each operation, and of the sequence of operations.

D. Schedule of Building Demolition Activities: Indicate the following:
   1. Detailed sequence of demolition and removal work, with starting and ending dates for each activity.
   2. Interruption of utility services.
   3. Coordination for shutoff, capping, and continuation of utility services.
   4. Locations of temporary protection and means of egress.

E. Inventory: After building demolition is complete, submit a list of items that have been removed or salved.

F. Pre-demolition Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by building demolition operations. Submit before Work begins.

G. Landfill records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.5 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent t that indicated for this Project.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Comply with ANSI A10.6 and NFPA 241.

D. Pre-demolition Conference: Conduct conference at Project site. Review methods and procedures related to building demolition, including, but not limited to, the following:
   1. Inspect and discuss condition of construction to be demolished.
   2. Review structural load limitations of existing structures.
   3. Review and finalize building demolition schedule and verify availability of demolition personnel, equipment, and facilities to make progress and avoid delays.
   4. Review and finalize protection requirements.

1.6 PROJECT CONDITIONS

A. Provide Owner not less than 3 days' notice prior to demolition activities.

B. Furniture and other unattached portable equipment to be salvaged will be removed by the Owner

C. Maintain across to existing walkways and other adjacent occupied or used facilities. Do not close or obstruct walkways, exits, or other occupied or used facilities without written permission from authorities having jurisdiction.

D. Owner assumes no responsibility for buildings and structures to be demolished.
   1. Conditions existing at time of inspection for bidding purposes will be maintained by Owner as far as practical.

E. Storage or sale of removed items or materials on site is not permitted.

PART 2 – PRODUCTS

2.1 SOILS MATERIALS

A. Satisfactory soils: ASTM D 2487 soil classification groups, GW, GP, GM, CL, SW, SP, ML and SM, or a combination of these group symbols; free of organic matter, ash, cinders, debris, waste, frozen materials, vegetation, and other deleterious matter; and with plasticity index less than 10, and containing less than 15 percent by weight rock fragments larger than 3 inches, less than 30 percent by weight larger than 3/4-inch and less than 30 percent by weight smaller than No. 200; or on of the following:

1. Clean well graded soils acceptable to Owner's Representative and contractor's Civil Engineer, if required by Owner's Representative, with good strength characteristics with a maximum particle size of 3 inches and containing not more than 20 percent silt/clay by weight. On-site shot-rock meeting this requirement will be considered satisfactory.

2. On-site soils identified in Report of Geologic Exploration as Stratum I, II, and III if maintained at optimum moisture content.

3. Crushed and processed asphalt and masonry rubble from demolition activities may be used for infill of below grade voids once building has been demolished only where approved by the Owner's Representative.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Survey existing conditions and correlate with requirements indicated to determine extent of building demolition required.

B. Inventory and record the condition of items to be removed and salvaged.

C. When unanticipated mechanical, electrical, or structural elements are encountered, investigate, and measure the nature and extent of the element. Promptly submit a report to the Owner and Owner's Representative.

D. Verify that hazardous materials have been remediated before proceeding with building demolition operations.

3.2 PREPARATION

A. Existing utilities remaining on site: Locate, identify, disconnect, and seal or cap off indicated utilities serving building to be demolished in accordance with respective utility requirements.

1. Do not start demolition work until utility disconnecting and sealing have been completed and verified in writing.

2. Arrange to shut off indicated utilities with respective utility companies.

3. If utility services are required to be removed, relocated, or abandoned, before proceeding with building demolition provide temporary utilities that bypass building and structures to be demolished and that maintain continuity of service to other buildings and structures, if applicable.

4. Cut off pipe or conduit a minimum of 24 inches below grade. Cap, valve, or plug and seal.

5. Remove refrigerant from air conditioning equipment before starting demolition.

B. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of demolition.

3.3 DEMOLITION GENERAL

A. General: Demolish indicated existing building completely. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Do not use cutting torches until work area is cleared of flammable materials. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.

2. Maintain adequate ventilation when using cutting torches.

3. Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

B. Engineering surveys: Perform surveys as the Work progresses to detect hazards that may result from building demolition activities.

C. Site Access and Temporary Controls: Conduct building demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from the Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

2. Use water mist or other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.

3.4 MECHANICAL DEMOLITION

A. Remove buildings, structures, and other improvements intact when permitted by authorities having jurisdiction.

B. Remove debris from elevated portions by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
1. Remove structural framing members and lower to ground by method suitable to minimize ground impact or dust generation.

C. Below-Grade Construction: Remove below-grade construction, including foundation walls and footings, completely unless otherwise indicated.

D. Existing Utilities: Demolish and remove existing utilities and below-grade utility structures to a point a minimum of 5 feet beyond the building or to practical point as determined by the Owner's Representative.

E. Mechanical Equipment: Remove and dispose of mechanical equipment off-site in accordance with all local, county, state, and federal lows, ordinances, and codes.

3.5 EXPLOSIVE DEMOLITION

A. Explosives: Use of explosives is not permitted.

3.6 SITE RESTORATION

A. Below-Grade Areas: Completely fill below-grade areas and voids or depressions resulting from building demolition operations with satisfactory materials and compacted to 90% minimum dry density according to ASTM D698. Areas shall be flush with existing grade and provide positive drainage. Stabilize area with annual ryegrass.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished material from Project site, and legally dispose of them in an EPA-approved landfill. Comply with federal, state, and local hauling and disposal regulations.
   1. Do not allow demolished materials to accumulate on-site.

   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not set fire to structures. Burning of burn demolished materials and debris will not be permitted.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.8 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.

END OF SECTION

SECTION 03050

BASIC CONCRETE MATERIALS AND METHODS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Formwork.
   2. Reinforcement.
   3. Accessories.
   4. Cast-in place concrete.
   5. Finishing and curing.

1.2 SYSTEM DESCRIPTION

A. Design, engineer and construct formwork, shoring and bracing in accordance with ACI 301, ACI 318 to conform to design and applicable code requirements to achieve concrete shape, line and dimension.

B. Vapor Retarder Permeance: Maximum 1 perm when tested in accordance with ASTM E96, Procedure A.

1.3 SUBMITTALS

A. Shop Drawings:
   1. Indicate pertinent dimensioning, form materials, arrangement of joints and ties, location of bracing and temporary supports, schedule of erection and stripping.
   2. Indicate reinforcement sizes, spacings, locations, and quantities, bending and cutting schedules, supporting and spacing devices.
   3. Indicate sidewalks and slabs-on-grade.

B. Product Data: Indicate admixtures and anchors.

C. Design Data: Submit mix designs.

1.4 QUALITY ASSURANCE

A. Construct and erect concrete formwork in accordance with ACI 301 and ACI 318.

B. Perform concrete reinforcing work in accordance with ACI 301, ACI 315, ACI 318 and CRSI Manual of Practice.

C. Perform cast-in-place concrete work in accordance with ACI 301, ACI 318 and ACI 305.

D. Design Work under direct supervision of Professional Engineer experienced in design of this Work and licensed at Project location.

PART 2 PRODUCTS

2.1 FORM MATERIALS AND ACCESSORIES

A. Plywood: PS 1, C Grade, any species; sound undamaged sheets with clean true edges.

B. Lumber: any species.

C. Prefabricated Steel Type: Minimum 16 gage, matched, tight fitting, stiffened to support weight of concrete.

D. Form Release Agent: Colorless mineral oil not capable of staining concrete or impairing natural bonding characteristics of coating intended for use on concrete.

E. Formed Construction Joints for Slab-on-Grade: Galvanized steel, tongue and groove type profile, knockout holes to receive doweling.

F. Slab Edge Joint Filler: ASTM D1751, Pre-molded asphaltic board, ½ inch thick.

G. Vapor Retarder: ASTM E1745 Class A; 6 mil thick clear polyethylene film; type recommended for below grade application. Furnish joint tape recommended by manufacturer.

2.2 REINFORCEMENT MATERIALS

A. Deformed Reinforcement: ASTM A615/A615M; 60 ksi yield strength, steel bars, unfinished.

B. Welded Plain Wire Fabric: ASTM A185; in flat sheets; unfinished.

C. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for support of reinforcing; plastic tipped or non-corroding for supports in slabs forming finished ceilings or where supports are exposed to weather.

D. Fabricate concrete reinforcement in accordance with CRSI Manual of Practice, ACI 301 and ACI 318 code.

E. Weld reinforcement in accordance with AWS D1.4.

2.3 CONCRETE MATERIALS

A. Cement: ASTM C150, Normal-Type I, Portland type.

B. Fine and Coarse Aggregates: ASTM C33.

C. Water: Clean and not detrimental to concrete.

D. Air Entrainment Admixture: ASTM C260.

E. Bonding Agent: Latex emulsion.

F. Non-shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.

2.4 COMPOUNDS, HARDENERS AND SEALERS

A. Chemical Hardener/Sealer: Lapidolith manufactured by Sonneborn Building Products.

2.5 CONCRETE MIX

A. Mix and deliver concrete in accordance with ASTM C94/C94M, Option A.

B. Furnish concrete of the following strength:
   1. Footings
      a. Compressive strength 3,000 psi at 28 days.
      b. Slump: 3 inches maximum
   2. Interior slabs
      a. Compressive strength: 3500 psi at 28 days
      b. Slump: 4 inches maximum
   3. Exterior slabs, After Hours Night Deposit
      a. Compressive strength: 4500 psi at 28 days
      b. Slump: 4 inches maximum

C. Select admixture proportions for normal weight concrete in accordance with ACI 318.

D. Add air entraining agent to concrete mix for concrete work exposed to exterior.

PART 3 EXECUTION

3.1 FORMWORK ERECTION

A. Erect formwork, shoring and bracing to achieve design requirements.

B. Camber slabs and framing to achieve ACI 301 tolerances.

C. Provide bracing to ensure stability of formwork.

D. Apply form release agent to formwork prior to placing form accessories and reinforcement.

E. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings affected by agent.

F. Clean forms as erection proceeds, to remove foreign matter.

3.2 INSERTS, EMBEDDED COMPONENTS, AND OPENINGS

A. Provide formed openings where required for work to be embedded in and passing through concrete members.

B. Coordinate work of other sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.

C. Install concrete accessories straight, level, and plumb.

D. Place formed construction joint device in floor slab pattern pouring sequence.

E. Place joint filler at perimeter of floor slab, penetrations and isolation joints.

3.3 REINFORCEMENT PLACEMENT

A. Place reinforcement, supported and secured against displacement.

B. Ensure reinforcing is clean, free of loose scale, dirt, or other foreign coatings.

C. Weld reinforcement in accordance with AWS D1.4.
   1. Do not weld crossing reinforcement bars for assembly.

D. Space reinforcement bars with minimum clear spacing in accordance with ACI 301 and ACI 318.
   1. Where bars are indicated in multiple layers, place upper bars directly above lower bars.

E. Maintain concrete cover around reinforcement in accordance with ACI 301 and ACI 318.

3.4 PLACING CONCRETE

A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent.

B. Install vapor retarder under interior slabs on grade in accordance with ASTM E1643. Lap joints minimum 6 inches and seal watertight.

C. Repair damaged vapor retarder with vapor retarder material, lap over damaged areas minimum 6 inches and seal watertight.

D. Separate slabs-on-grade from vertical surfaces with ½ inch thick joint filler, extended from bottom of slab to within ¼ inch of finished slab surface.

E. Place concrete continuously between predetermined expansion, control and construction joints.

F. Screed slabs-on-grade level.

3.5 FORM REMOVAL

A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.

B. Remove formwork progressively and in accordance with code requirements.

3.6 FLOOR FINISHING

A. Finish concrete floor surfaces in accordance with ACI 301 and ACI 302.1.

B. Uniformly spread, screed, and float concrete.

C. Steel trowel surfaces receiving carpeting, resilient flooring, thin set quarry tile, thin set ceramic tile or remaining exposed to view in finished construction.

D. Maintain surface flatness, with maximum variation of 1/8 inch in 10ft.

E. In areas with floor drains, maintain floor level at walls and slope surfaces uniformly to drains.

F. Apply concrete hardener/sealer on floor surfaces as scheduled.

3.7 CURING AND PROTECTION

A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
   1. Protect concrete footings from freezing for minimum 5 days.

B. Apply sealer on floor surfaces.

C. Immediately after placement, protect concrete from premature drying.

D. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete for not less than 7 days.

3.8 FORMED SURFACES

A. Provide concrete surfaces to be left exposed.

3.9 ERECTION TOLERANCES

A. Install reinforcement within tolerances required by ACI 301 and ACI 318 code.

3.10 FIELD QUALITY CONTROL

A. Perform field inspection and testing in accordance with ACI 301 and ACI 318.

B. Reinforcement Inspection:
   1. Inspect for correct materials, fabrication, sizes, locations, spacing, concrete cover, and splicing.

C. Strength Test Samples:
   1. Sample concrete and make one set of three cylinders for every 75 cu yds or less of each class of concrete placed each day.

D. Field Testing:
   1. Measure slump and temperature for each compressive strength concrete sample.
   2. Measure air content in air entrained concrete for each compressive strength concrete sample.

E. Cylinder Compressive Strength Testing:
   1. Test Method: ASTM C39.
   2. Test Acceptance: In accordance with ACI 301 and ACI 318.
   3. Test two cylinders at 28 days.
   4. Retain one cylinder for testing when requested by Architect/Engineer.
   5. Dispose remaining cylinders when testing is not required.

3.11 DEFECTIVE CONCRETE

A. Modify or replace concrete not conforming to required lines, details and elevations, as directed by Architect/Engineer.

END OF SECTION

SECTION 05400

COLD-FORMED METAL FRAMING

PART 1 GENERAL

1.1 SUMMARY

A. Section includes load bearing formed steel stud exterior wall and exterior soffit/fascia framing and formed steel framing and bridging.

1.2 SYSTEM DESCRIPTION

A. Size components to withstand design loads as follows as indicated on drawings.

B. Maximum Allowable Deflection: 1: 240 of span.

C. Wall System:
1. Design to AISI NASPEC, AISC General, and AISC Header.
2. Design to provide for movement of components without damage, failure of joint seals, undue stress on fasteners, or other detrimental effects when subject to seasonal or cyclic day/night temperature ranges.

D. Design system to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.

E. Seismic Design: Design and detail elements and connections to resist seismic force in accordance with 2015 Michigan Building Code requirements and ACI 318 for Seismic Zone 0 and Seismic Importance Factor 1.

1.3 SUBMITTALS

A. Shop Drawings:
1. Indicate component details, framed openings, bearing, anchorage, loading, type and location of fasteners and accessories or items required of related work.
2. Indicate stud and soffit/fascia layout.
3. Provide calculations for loadings and stresses of framing sealed by Professional Structural Engineer registered in State of Michigan.

B. Product Data: Describe materials and finish, product criteria and limitations.

1.4 QUALITY ASSURANCE

A. Calculate structural properties of framing members in accordance with AISI NASPEC.

B. Furnish framing materials in accordance with SSMA - Product Technical Information.

C. Design framing under direct supervision of Professional Engineer experienced in design of this Work and licensed in State of Michigan.

PART 2 PRODUCTS

2.1 COLD FORMED METAL FRAMING

2.2 FRAMING COMPONENTS

A. Steel Sheet: ASTM A1003/A1003M; Structural Grade, Type H, metallic coated:
   1. Grade: As required by performance requirements.
   2. Coating: G60 (Z180).

B. Studs: Steel sheet, formed to channel shape, punched web; 0.048-inch-thick and size as indicated on drawings.

C. Track: Steel sheet, formed to channel shape; same width as studs, tight fit; 0.048-inch-thick, solid web.

2.3 ACCESSORIES

A. Bracing, Furring, Bridging, Plates, Gussets and Clips: Formed sheet steel, thickness determined by performance requirements specified; same finish as framing members.

B. Screws: Self drilling, self-tapping.

C. Anchorage Devices: Power actuated.

D. Welding: In accordance with AWS D1.1 and AWS D1.3.

E. Touch-Up Primer for Galvanized Surfaces: SSPC Paint 20 Type I Inorganic.
   1. Interior Anti-Corrosive Paints: Maximum volatile organic compound content in accordance with GC-03.

2.4 FABRICATION

A. Fabricate assemblies of sizes and profiles required; with framing members fitted, reinforced and braced.

B. Fit and assemble in largest practical sections for delivery to site, ready for installation.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify building framing components are ready to receive work.

3.2 ERECTION OF STUDS

A. Align floor and ceiling tracks; locate to wall layout. Secure in place with fasteners at maximum 24 inches oc. Coordinate installation of sealant with floor tracks.

B. Place studs at 16 inches oc; not more than 2 inches from abutting walls and at each side of openings. Connect studs to tracks using fastener method.

C. Construct corners using minimum three studs. Double stud wall openings, door and window jambs.

D. Erect load bearing studs one-piece full length. Splicing of studs is not permitted.

E. Allow for deflection, directly below horizontal building framing for non-load bearing framing.

F. Attach furring channels to studs for attachment of fixtures anchored to walls and for attachment of mechanical and electrical items within walls.

G. Touch-up field welds and damaged primed surfaces with primer to match shop coating.

3.3 TOLERANCES

A. Maximum Variation from Indicated Position: 1/4-inch.

B. Maximum Variation of Member from Plane: 1/4-inch.

END OF SECTION

SECTION 06100

ROUGH CARPENTRY

PART 1 GENERAL

1.1 SUMMARY

A. Section includes wall sheathing; and roof curbs; blocking in wall and roof openings; wood furring and grounds; electrical panel back boards, concealed wood blocking.

1.2 SUBMITTALS

A. Shop Drawings: Indicate framing system, loads and cambers, bearing details, framed openings.

1.3 QUALITY ASSURANCE

A. Perform Work in accordance with the following:
   1. Lumber Grading Agency: Certified by DOC PS 20.
   2. Lumber: DOC PS 20.
   3. Wood Structural Panels: DOC PS 1 or DOC PS 2.

PART 2 PRODUCTS

2.1 LUMBER MATERIALS

A. Lumber Grading Rules: WWPA G-5.

2.2 SHEATHING MATERIALS

A. Wall Sheathing: Rated sheathing structural I plywood or oriented strand board, span rating 40/20 exposable durability I, sanded.

B. Telephone and Electrical Panel Boards: Plywood.

2.3 SHEATHING AND UNDERLAYMENT LOCATIONS

A. Above Grade Wall Sheathing: 5/8-inch-thick, 48 x 96-inch sized sheets, square edges.

2.4 ACCESSORIES

A. Fasteners and Anchors:
   1. Fasteners: Hot dipped galvanized steel for high humidity and treated wood locations, unfinished steel elsewhere.
   2. Nails and Staples: ASTM F1667.

B. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolt or ballistic fastener for anchorages to steel.

PART 3 EXECUTION

3.1 FRAMING

A. Set structural members level and plumb, in correct position.

B. Fasten framing in accordance with applicable code.

C. Place horizontal members crown side up.

D. Curb roof openings except where curbs are provided. Construct curb members of single pieces for each side.

3.2 SHEATHING

A. Install wall sheathing in accordance with ASTM C1280.

B. Fasten sheathing in accordance with applicable code.

C. Install sheathing to two span continuous.

D. Secure wall sheathing with ends staggered, over firm bearing.

E. Install telephone and electrical panel back boards with plywood sheathing material where required. Size back board by 12 inches beyond size of electrical panel.

END OF SECTION

SECTION 07900

JOINT SEALERS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes sealants and joint backing.

B. Refer to Division 0 and Division 1 requirements. Requirements of these divisions and project drawings shall govern work of this section.

1.2 SUBMITTALS

A. Product Data: Submit data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

1.3 ENVIRONMENTAL REQUIREMENTS

A. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

PART 2 PRODUCTS

2.1 JOINT SEALERS

A. Manufacturers:
   1. Dow Corning Corp.
   2. GE Silicones.
   3. Pecora Corp.
   4. Sika Corp.
   5. Substitutions: Permitted.

B. Product Description:
   1. High Performance General Purpose Exterior (Nontraffic) Sealant: Polyurethane; ASTM C920, Grade NS, Class 25, Uses M, G, and A; single component.
      a. Type: A.
      b. Color: Standard colors matching finished surfaces.
      c. Applications: Use for:
         1) Control, expansion, and soft joints in masonry.
         2) Joints between concrete and other materials.
         3) Joints between metal frames and other materials.
         4) Other exterior nontraffic joints for which no other sealant is indicated.
   2. General Purpose Traffic Bearing Sealant: Polyurethane; ASTM C920, Grade P, Class 25, Use T; single component.
      a. Type: B.
      b. Color: Standard colors matching finished surfaces.
      c. Applications: Use for exterior vehicular traffic bearing joints.
   3. Exterior Metal Lap Joint Sealant: Butyl or polyisobutylene, non-drying, non-skinning, non-curing.
      a. Type: C.

b. Applications: Use for concealed sealant bead in sheet metal work and concealed sealant bead in siding overlaps.

4. General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, single component, paintable.
   a. Type: D.
   b. Color: Standard colors matching finished surfaces.
   c. Applications: Use for interior wall and ceiling control joints, joints between door and window frames and wall surfaces, and other interior joints for which no other type of sealant is indicated.
5. Acoustical Sealant: Butyl or acrylic sealant; ASTM C920, Grade NS, Class 12-1/2, Uses M and A; single component, solvent release curing, non-skinning.
   a. Type: F.
   b. Applications: Use for concealed locations only at acoustically rated construction.
      1) Provide sealant bead between top stud runner and structure and between bottom stud track and floor.
6. Sealant - Butyl Sealant: ASTM C920, Grade NS, Class 12-1/2, Use NT; single component, solvent release, non-skinning, non-sagging.
   a. Type: G.
   b. Color: Black.
   c. Movement Capability: Plus and minus 12-1/2 percent.
   d. Service Temperature Range: -13 to 180 degrees F.
   e. Shore A Hardness Range: 10 to 30.
7. Sealant - Non-sag Polyurethane Sealant: ASTM C920, Grade NS, Class 25, Uses NT, M; single component, chemical curing, non-staining, non-bleeding, non-sagging type.
   a. Type: H.
   b. Color: Standard colors matching finished surfaces.
   c. Movement Capability: Plus and minus 25 percent.
   d. Service Temperature Range: -40 to 180 degrees F.
   e. Shore A Hardness Range: 20 to 35.
8. Sealant - Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Class 25, Uses T, M, A; single component, chemical curing, non-staining, non-bleeding, capable of continuous water immersion, self-leveling type.
   a. Type: I.
   b. Color: Standard color matching finished surfaces.
   c. Movement Capability: Plus and minus 25 percent.
   d. Service Temperature Range: -40 to 180 degrees F.
   e. Shore A Hardness Range: 20 to 35.

2.2 ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

C. Joint Backing: Round foam rod compatible with sealant; ASTM D1667, closed cell PVC; oversized 30 to 50 percent larger than joint width.

D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify substrate surfaces and joint openings are ready to receive work.

B. Verify joint backing and release tapes are compatible with sealant.

3.2 PREPARATION

A. Remove loose materials and foreign matter impairing adhesion of sealant.

B. Clean and prime joints.

C. Perform preparation in accordance with ASTM C1193.

3.3 INSTALLATION

A. Perform installation in accordance with ASTM C1193.

B. Perform acoustical sealant application work in accordance with ASTM C919.

C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.

D. Install bond breaker where joint backing is not used.

E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

G. Tool joints concave.

3.4 SCHEDULE

A. Exterior Joints for Which No Other Sealant Type is Indicated: Type A.

B. Control and Expansion Joints in Paving: Type B.

C. Exterior Wall Expansion Joints: Type A.

D. Control, Expansion, and Soft Joints in Masonry, and Between Masonry and Adjacent Work: Type A.

E. Lap Joints in Exterior Sheet Metal Work: Type C.

F. Butt Joints in Exterior Metal Work and Siding: Type C.

G. Joints between Exterior Metal Frames and Adjacent Work (except masonry): Type H.

H. Under Exterior Door Thresholds: Type G.

I. Interior Joints for Which No Other Sealant is Indicated: Type D.

J. Control and Expansion Joints in Interior Concrete Slabs and Floors: Type I.

K. Joints Between Plumbing Fixtures and Walls and Floors, and Between Counter tops and Walls: Type E.

L. In STC-Rated Walls, Between Metal Stud Track/Runner and Adjacent Construction, Between Outlet Boxes and Gypsum Board: Type F.

END OF SECTION

SECTION 08110

STEEL DOORS AND FRAMES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes steel doors and frames; non-rated and fire rated, interior borrowed light frames.

1.2 SUBMITTALS

A. Shop Drawings: Indicate door and frame elevations, internal reinforcement, cut-outs for glazing.

B. Product Data: Submit door and frame configurations, location of cut-outs for hardware reinforcement.

1.3 QUALITY ASSURANCE

A. Perform Work in accordance with the following:
1. ANSI 250.8 - Recommended Specifications for Standard Steel Doors and Frames.
2. DHI - Door Hardware Institute - The Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames and Builder's Hardware.
3. NFPA-101 - Life Safety Code.
4. Michigan Building Code 2009.
5. ANSI A117.1 - Accessible and Useable Buildings and Facilities.
6. ADA - Americans with Disabilities Act.
7. NFPA 80 - Fire Doors and Windows.
8. SDI-107 - Hardware on Steel Doors.
9. ANSI A250.4 - Steel Doors and Frames Physical Endurance.
10. SDI-105 - Recommended Erection for Steel Doors and Frames.

B. Fire Rated Door Construction: Conform to one of the following:
1. NFPA 252; with neutral pressure level at 40 inches maximum above sill at 5 minutes into test.
2. UL 10C - Standard for Positive Pressure Fire Test for Door Assembly.
3. 20-Minute Fire Rated Corridor Doors: Fire tested without hose stream test.
4. NFPA 80 - Fire Doors and Windows.

C. Fire Rated Door Construction: Conform to UBC Standard 7-2.

D. Fire Rated Stair Doors: Rate of rise of 450 degrees F across door thickness.

E. Installed Fire Rated Door Assembly: Conform to NFPA 80 for fire rated class as indicated on Drawings.

F. Attach label from agency approved by authority having jurisdiction to identify each fire rated door.
1. Indicate temperature rise rating for stair doors.

G. Surface Burning Characteristics:
   1. Foam Insulation: Maximum 75/450 flame spread/smoke developed index when tested in accordance with ASTM E84, NFPA 255, UL 723.

H. Apply label from agency approved by authority having jurisdiction to identify each foam plastic insulation material.

PART 2 PRODUCTS

2.1 STEEL DOORS AND FRAMES

A. Manufacturers:
   1. Ceco Door Products.
   2. Republic Doors.
   3. Steelcraft.
   4. Curries Manufacturing, Inc.

B. Product Description: Standard shop fabricated steel doors and frames; fire rated and non-rated types; flush face or stile and rail design.

2.2 COMPONENTS

A. All doors and frames shall be manufactured of commercial quality cold rolled steel per ASTM A366 and A568 general requirements; galvanized to A60 or G60 or galvanized to A40 minimum coating weight standard per ASTM A924. Internal reinforcing may be manufactured of hot rolled pickled and oiled steel per ASTM A569.

B. Supports and anchors shall be fabricated of not less than 18-gauge sheet steel, galvanized where galvanized frames are used.

C. Where items are to be built into exterior walls, inserts bolts and fasteners shall be hot dipped galvanized in compliance with ASTM A153, Class C or D as applicable.

D. Rust inhibitive enamel or paint primer shall be used, baked on and suitable as a base for specified finish paints complying with ANSI A224.1, “Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces on Steel Doors and Frame.”

E. Provide all hollow metal doors and frames receiving electrified hardware with Molex wiring harness and concealed plug connectors on one end to accommodate up to twelve wires. Coordinate Molex connectors on end of the wiring harness to plug directly into the electrified hardware and the electric hinge.

2.3 DOORS

1. Exterior Doors: Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A924 A60. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level, and HMMA 867 for door construction.
   a. Design: Flush panel.
   b. Core Construction: Face sheets are supported by a steel stiffened core with polyurethane filler. 22-gauge stiffeners are placed no more than 6” apart and welded no more than 5” along their length. The core fills the entire door cavity and is chemically bonded to all interior surfaces.

Density of foam exceeds 1.8 pcf and has a crush strength of 3600 psf. No stiffener face welding is permitted. Thermal properties for insulating foam core shall be a minimum R factor of 11.01, as calculated per ASTM C518.

c. Level/Model: Level 2 and Physical Performance Level A (Extra Heavy Duty), minimum 16 gauge (0.042 inch - 1.1 mm) thick steel, Model 2.

d. Vertical Edges: Vertical edges to be mechanically interlocked with hairline seam continuously welded, filled and ground smooth the full height of door.
   1) Vertical Edges for Single-Acting Doors: Beveled Edge, 1/8 inch in 2 inches.

e. To and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16-gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel welded in place with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.

f. Hinge Reinforcement: Minimum 7-gauge (3/16") plate 1 ¼" x 9."

g. Acceptable Manufacturers:
   1) CECO Door Products - Trio-E Series.
   2) Curries Company - Trio-E Series.

B. All doors shall be reinforced for hardware as shown below where necessary to preclude the use of thru-bolts.
   1. Exit Devices: 14-gauge.
   2. Door Closers: 12-gauge.

C. All doors shall be beveled 1/8" in 2" and shall have top and bottom channels of not less than 16-gauge, flush or inverted, welded to the face sheets. Doors shall have a full height 14-gauge hinge rail reinforcement channel or individual 10-gauge hinge reinforcements.

D. All doors to conform to ANSI A250.4 Level "A" criteria and shall be tested to 1,000,000 operating cycles and 23 twist tests. Certification of Level "A" doors is to be submitted with approval drawings by supplier upon request. Do not bid or supply any type or gauge of door not having been tested and passed these criteria.

2.4 FRAMES

A. Provide hollow metal frames for doors, transoms, sidelights, borrowed lights and other openings, of types and styles as shown on the drawings and schedules. Conceal fastenings unless otherwise indicated.
   1. Exterior Frames: Level 2, 16-gauge, galvanized or galvanealed.
      a. Ceco: SU Series.
      b. Curries: M Series.

B. Fabricate frames with mitered and faces only welded corners, re-prime at the welded areas. All welds to be flush with neatly mitered or butted material cuts.

C. All frames shall have minimum 7-gauge hinge reinforcements, 14 gauge lock strike reinforcing and 12 gauge closer reinforcing.

D. Provide temporary shipping bars to be removed before setting frames.

E. Except on weather stripped or thermally broken frames, drill stops to receive three (3) silencers on strike jambs of single frames and two (2) silencers on heads of double frames.

F. Provide minimum 0.0179” thick steel plaster guards or mortar boxes at back of hardware cutouts where mortar or other materials might obstruct hardware operation and to close off interior of openings.

2.5 ACCESSORIES

A. Bituminous Coating: Fibered asphalt emulsion.

B. Primer: ANSI A250.10 rust inhibitive type.

C. Weatherstripping: Specified in Section 08710.

2.6 FABRICATION

A. Fabricate steel door and frame units to be rigid, neat in appearance and free from defects, warp or buckle. Where practical, fit and assemble units in manufacturer’s plant. Clearly identify work that cannot be permanently factory assembled before shipment, to assure proper assembly at Project Site. Comply with ANSI/SDI 100 requirements.
   1. Clearances shall be no more than 1/8” at jambs and heads except between non-fire rated pairs of doors which may be no more than ¼.” Not more than ¾” at the bottom of the doors.

B. Fabricate exposed faces of doors and panels, including stiles and rails of non-flush units, from only cold-rolled steel sheet.

C. Tolerances shall comply with SDI-117 “Manufacturing Tolerances Standard Steel Doors and Frames.”

D. Fabricate concealed stiffeners, reinforcement, edge channels, louvers and moldings from either cold- or hot-rolled steel sheet.

E. Unless otherwise indicated, provide exposed fasteners with countersunk flat or oval heads for exposed screws and bolts.

F. At exterior locations and elsewhere as shown or scheduled, assemblies fabricated as thermal-insulating door and frame assemblies and tested according to ASTM C236 or ASTM C976 on fully operable door assemblies.
   1. Unless otherwise indicated, provide thermal-rated assemblies with a minimum U-value rating of 0.41 Btu/sq. ft. x h x deg. F.

G. Prepare doors and frames to receive mortised and concealed hardware according to final door hardware schedule and templates provided by hardware supplier. Comply with applicable requirements of SDI-107 and ANSI A115 Series specifications for door and frame preparation for hardware.

H. Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied hardware may be done at Project Site. Provide internal reinforcements for all doors to receive door closers and exit devices.

I. Locate hardware as indicated on Shop Drawings or, if not indicated, according to the Door and Hardware Institute's (DHI) "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."

J. Provide glazing stops with minimum 0.0359-inch-thick steel or 0.040 inch thick aluminum.

K. Provide non-removable stops on outside of exterior doors and on secure side of interior doors for glass, louvers and other panels in doors.

L. Provide screw-applied, removable, glazing beads on inside of glass and other panels in doors.

M. Attach fire rating label to each door and frame that is fire rated. Indicate temperature rise rating for stair doors.

2.7 SHOP FINISHING

A. Steel Sheet: Galvanized to ASTM A653/A653M G90.

B. Primer: Baked.

C. Coat inside of frame profile with bituminous coating.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify opening sizes and tolerances are acceptable.

3.2 INSTALLATION

A. Install steel doors, frames and accessories according to shop drawings, manufacturer's data and as specified.

B. Comply with provisions of SDI-105, "Recommended Erection Instructions for Steel Door Frames," unless otherwise indicated. Set frames accurately in position, plumbed, aligned and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
   1. Except for frames located in existing concrete, masonry or gypsum board assembly construction, place frames before constructing enclosing walls and ceilings.
   2. In masonry construction, install at least 3 wall anchors per jamb adjacent to hinge location on hinge jamb and at corresponding heights on stride jamb. Acceptable anchors include masonry wire anchors and masonry T-shaped anchors.
   3. At existing concrete or masonry construction, install at least 3 completed opening anchors per jamb adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Set frames and secure to adjacent construction with bolts and masonry anchorage devices.
   4. In metal-stud partitions, install at least 3 wall anchors per jamb at hinge and strike levels. In steel-stud partitions, attach wall anchors to studs with screws.
   5. Install fire-rated frames according to NFPA 80.

C. Fit hollow-metal doors accurately in frames, within clearances specified in ANSI/SDI 100. Install fire rated doors with clearances specified in NFPA 80.

3.3 ADJUSTING AND CLEANING

A. Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touchup of compatible air-drying primer.

B. Immediately before final inspection, remove protective wrappings from doors and frames.

C. Tolerances:
1. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

END OF SECTION

SECTION 08710
DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Hardware for wood, aluminum, and hollow metal doors.

B. Electrically operated and controlled hardware.

1.02 REFERENCE STANDARDS

A. BHMA A156.1 - Standard for Butts and Hinges; 2021.

B. BHMA A156.4 - Door Closers and Pivots; 2024.

C. BHMA A156.8 - Door Controls - Overhead Stops and Holders; 2021.

D. BHMA A156.13 - Mortise Locks & Latches Series 1000; 2022.

E. BHMA A156.16 - Standard for Auxiliary Hardware; 2023.

F. BHMA A156.18 - Standard for Materials and Finishes; 2020.

G. BHMA A156.26 - Standard for Continuous Hinges; 2021.

H. BHMA A156.31 - Electric Strikes and Frame Mounted Actuators; 2024.

I. UL (DIR) - Online Certifications Directory; Current Edition.

1.03 SUBMITTALS

A. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.

B. Shop Drawings - Door Hardware Schedule: Submit detailed listing that includes each item of hardware to be installed on each door. Use door numbering scheme as included in Contract Documents.

1. Prepared by or under supervision of Architectural Hardware Consultant (AHC).

2. Provide complete description for each door listed.

PART 2 PRODUCTS

2.01 DESIGN AND PERFORMANCE CRITERIA

A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.

B. Provide individual items of single type, of same model, and by same manufacturer.

C. Provide door hardware products that comply with the following requirements:

1. Applicable provisions of federal, state, and local codes.

2.02 HINGES

A. Manufacturers:

1. Basis of Design: Match existing hardware,.

B. Hinges: Comply with BHMA A156.1, Grade 1.

1. Continuous Hinges: Comply with BHMA A156.26.

2. Provide hinges on every swinging door.

3. Provide following quantity of butt hinges for each door:

2.03 ELECTRIC STRIKES

A. Manufacturers:

1. Basis of Design: Match owner's existing hardware.

B. Electric Strikes: Comply with BHMA A156.31, Grade 1.

1. Provide UL (DIR) listed burglary-resistant electric strike; style to suit locks.

2. Provide non-handed 24 VDC electric strike suitable for door frame material and scheduled lock configuration.

2.04 LOCK CYLINDERS

A. Manufacturers:

1. Basis of Design: Match owner's existing hardware.

B. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.

1. Provide cylinders from same manufacturer as locking device.

2. Provide cams and/or tailpieces as required for locking devices.

2.05 MORTISE LOCKS

A. Manufacturers:

B. Mortise Locks: Comply with BHMA A156.13, Grade 1, Security, 1000 Series.

1. Latchbolt Throw: 3/4 inch (19 mm), minimum.

2. Deadbolt Throw: 1 inch (25.4 mm), minimum.

3. Backset: 2-3/4 inch (70 mm) unless otherwise indicated.

4. Strikes: Provide manufacturer's standard strike for each latchset or lockset with strike box and curved lip extending to protect frame in compliance with indicated requirements.

    a. Finish: To match lock or latch.

2.06 CLOSERS

A. Manufacturers; Surface Mounted:

1. Basis of Design: Match Owner's existing hardware.

B. Manufacturers; Concealed - Overhead:

C. Closers: Comply with BHMA A156.4, Grade 1.

1. Type: Surface mounted to door.

2. Provide door closer on each exterior door.

2.07 OVERHEAD STOPS AND HOLDERS

A. Manufacturers:

B. Overhead Stops and Holders (Door Checks): Comply with BHMA A156.8, Grade 1.

1. Provide stop for every swinging door, unless otherwise indicated.

2.08 WALL STOPS

A. Manufacturers:

1. Basis of Design: Match Owner's existing hardware.

B. Wall Stops: Comply with BHMA A156.16, Grade 1 and Resilient Material Retention Test as described in this standard.

1. Type: Bumper, concave, wall stop.

2. Material: Aluminum housing with rubber insert.

2.09 SILENCERS

A. Manufacturers:

1. Rockwood; an Assa Abloy Group company: www.assaabloydss.com/#sle.

B. Silencers: Provide at equal locations on door frame to mute sound of door's impact upon closing.

1. Single Door: Provide three on strike jamb of frame.

2. Pair of Doors: Provide two on head of frame, one for each door at latch side.

3. Material: Rubber, gray color.

2.10 FINISHES

A. Finishes: Provide door hardware of same finish, unless otherwise indicated.

1. Primary Finish: 625; bright chromium plated over nickel, with brass or bronze base material (former US equivalent US26); BHMA A156.18.

2. Secondary Finish: 626; satin chromium plated over nickel, with brass or bronze base material (former US equivalent US26D); BHMA A156.18.

a. Use secondary finish in kitchens, bathrooms, and other spaces containing chrome or stainless steel finished appliances, fittings, and equipment; provide primary finish on one side of door and secondary finish on other side if necessary.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that doors and frames are ready to receive this work; labeled, fire-rated doors and frames are properly installed, and dimensions are as indicated on shop drawings.

B. Verify that electric power is available to power operated devices and of correct characteristics.

3.02 INSTALLATION

A. Install hardware in accordance with manufacturer's instructions and applicable codes.

B. Use templates provided by hardware item manufacturer.

C. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list; unless noted otherwise in Door Hardware Schedule or on drawings.

D. Set exterior door thresholds with full-width bead of elastomeric sealant at each point of contact with floor providing a continuous weather seal; anchor thresholds with stainless steel countersunk screws.

END OF SECTION

SECTION 092116
GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Performance criteria for gypsum board assemblies.

B. Metal stud wall framing.

C. Acoustic insulation.

D. Gypsum wallboard.

E. Joint treatment and accessories.

1.02 RELATED REQUIREMENTS

A. Section 072100 - Thermal Insulation: Acoustic insulation.

1.03 REFERENCE STANDARDS

A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved 2022).

B. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2023.

C. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2022.

D. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2022.

E. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.

F. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.

G. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.

H. ASTM E413 - Classification for Rating Sound Insulation; 2022.

I. GA-216 - Application and Finishing of Gypsum Panel Products; 2024.

1.04 SUBMITTALS

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

B. Interior Partitions, Indicated as Acoustic: Provide completed assemblies with the following characteristics:

1. Acoustic Attenuation: STC of 45-49 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

2.02 METAL FRAMING MATERIALS

A. Manufacturers - Metal Framing, Connectors, and Accessories:

1. ClarkDietrich; ____: www.clarkdietrich.com/#sle.

2. Jaimes Industries; ____: www.jaimesind.com/#sle.

3. Steel Construction Systems; _____: www.steelconsystems.com/#sle.

4. Substitutions: Permitted.

B. Non-structural Steel Framing for Application of Gypsum Board: See Section 092216.

C. Partition Head To Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and fastened as indicated on drawings.

2.03 BOARD MATERIALS

A. Manufacturers - Gypsum-Based Board:

1. American Gypsum Company: www.americangypsum.com/#sle.

2. CertainTeed Corporation: www.certainteed.com/#sle.

3. Georgia-Pacific Gypsum: www.gpgypsum.com/#sle.

4. USG Corporation: www.usg.com/#sle.

B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.

1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.

2. Thickness:

a. Vertical Surfaces: 5/8 inch (16 mm).

b. Ceilings: 5/8 inch (16 mm).

2.04 GYPSUM BOARD ACCESSORIES

A. Acoustic Insulation: See Section 072100.

B. Beads, Joint Accessories, and Other Trim: ASTM C1047, rigid plastic, galvanized steel, or rolled zinc, unless noted otherwise.

1. Corner Beads: Low profile, for 90 degree outside corners.

C. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.

D. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches (0.84 mm) in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.

E. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch (0.84 to 2.84 mm) in Thickness: ASTM C954; steel drill screws, corrosion-resistant.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.02 FRAMING INSTALLATION

A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.

B. Studs: Space studs at 16 inches on center (at 406 mm on center).

1. Extend partition framing to structure in all locations.

2. Partitions Terminating at Structure: Attach extended leg top runner to structure, maintain clearance between top of studs and structure, and brace both flanges of studs with continuous bridging.

3.03 ACOUSTIC ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.

B. Acoustic Sealant: Install in accordance with manufacturer's instructions.

3.04 BOARD INSTALLATION

A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.

1. Not more than 30 feet (10 meters) apart on walls and ceilings over 50 feet (16 meters) long.

B. Corner Beads: Install at external corners, using longest practical lengths.

3.06 JOINT TREATMENT

A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:

1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.

2. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.

B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.

1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).

3.07 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

END OF SECTION

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SECTION 09510

ACOUSTICAL CEILINGS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes suspended metal grid ceiling system; and acoustic tile.

1.2 SYSTEM DESCRIPTION

A. Provide system capable of supporting imposed loads with deflection limited to.

1.3 SUBMITTALS

A. Shop Drawings: Indicate ceiling layout.

B. Product Data: Submit manufacturer's product data.

C. Samples: Submit ceiling tile and suspension system.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Acoustical Tile: Full-size units equal to 3 percent of amount installed for each type indicated, but not less than 10 sq. yd (8.3 sq. m).

1.5 QUALITY ASSURANCE

A. Conform to CISCA requirements.

B. Surface Burning Characteristics: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84 and NFPA 255 UL 723.

C. Surface Burning Characteristics: Comply with the following when tested in accordance with NFPA 286.
1. During 40 kW Exposure: No flame spread to ceiling.
2. During 160 kW Exposure: No flame spread to perimeter of tested sample and no flashover.
3. Total Smoke Release: Maximum 1,000 cu m.

1.6 ENVIRONMENTAL REQUIREMENTS

A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity acoustic unit installation.

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PART 2 PRODUCTS

2.1 SUSPENDED ACOUSTICAL CEILINGS

A. Manufacturers:
1. United States Gypsum Company
2. Armstrong
3. Substitutions: Not Permitted.

2.2 COMPONENTS

A. Grid:
1. Non-Fire Rated Grid: ASTM C635, intermediate duty, non-fire rated, exposed configuration; components die cut and interlocking.
2. Accessories: Stabilizer bars, clips, splices, edge moldings, hold down clips, required for suspended grid system.
3. Grid Materials: Commercial quality cold rolled steel with galvanized coating.
4. Exposed grid surface width: 15/16 inch.
5. Grid Finish: White color.
6. Support Channels and Hangers: Galvanized steel, size and type to suit application and ceiling system flatness requirements specified.
7. Seismic Hangers: Galvanized steel compression struts: Donn Corporation Series VSA or equal, size and type to suit seismic requirements.

B. Acoustic Ceiling (ACT-1):
1. Match existing acoustical tile ceiling.
2. Substitutions: Architect approved equal.

2.3 ACCESSORIES

A. Acoustic Batt Insulation: ASTM C665, friction fit type, unfaced; 2-inch thick.

B. Acoustic Sealant for Perimeter Moldings: Specified in Section 07900.

C. Touch-up Paint: Type and color to match acoustic and grid units.
1. Interior Flat and Non-Flat Paints: Maximum volatile organic compound content in accordance with GS-11.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify layout of hangers does not interfere with other work.

3.2 INSTALLATION

A. Suspension System:
1. Install system in accordance with ASTM C636, ASTM E580.
2. Coordinate location of hangers with other work. Where components prevent regular spacing of hangers, reinforce system to span extra distance.
3. Hang system independent of walls, columns, ducts, pipes and conduit.

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4. Locate system on room axis [leaving equal border units according to reflected plan.
5. Install edge molding at intersection of ceiling and vertical surfaces, using longest practical lengths.

B. Acoustic Units:
1. Install acoustic units level, free from damage, twist, warp or dents.
2. Lay acoustic insulation above acoustic units for distance of 48 inches on both sides of acoustic partitions.
3. Install hold down clips to retain panels tight to grid system within 20 ft of exterior doors.

C. Tolerances: Variation from Flat and Level Surface: 1/8 inch in 10 feet.

END OF SECTION

SECTION 09650

RESILIENT FLOORING

PART 1 GENERAL

1.0 SUMMARY

A. Section includes rubber stair risers, stair grit tape, vinyl plank flooring, and resilient base.

1.1 SUBMITTALS

A. Product Data: Submit manufacturer’s product data.

B. Samples:
1. Submit manufacturer's complete set of color samples for initial selection.
2. Submit two samples, 3 x 3 inch in size illustrating color and pattern for each resilient flooring product specified.

1.2 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit maintenance instruction and data.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Stair Risers, grit tape and resilient base: Full-size units’ equal 3 percent of amount installed for each type indicated, but not less than 10 sq. yd. (8.3 sq. m).

1.5 QUALITY ASSURANCE

B. Surface Burning Characteristics:
1. Floor Finishes: Class I, minimum 0.45 watts/sq cm when tested in accordance with NFPA 253.
2. Base Material: Class I, minimum 0.45 watts/sq cm when tested in accordance with NFPA 253.

1.6 ENVIRONMENTAL REQUIREMENTS

A. Maintain temperature in storage area between 55 degrees F and 90 degrees F.

B. Store materials for not less than 48 hours prior to installation in area of installation at temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

PART 2 PRODUCTS

2.1 VINYL COMPOSITE TILE:

A. Vinyl Composite Tile (VCT-1): Owner provided.

2.2 RESILIENT BASE

A. Vinyl Top Set Coved (V-1): Match existing style and color.

2.3 ACCESSORIES

A. Subfloor Filler: Premix latex; type recommended by floor material manufacturer.

B. Primers and Adhesives: Waterproof, types recommended by floor material manufacturer.
1. Interior Adhesives: Maximum volatile organic compound content in accordance with SCAQMD Rule 1168.

C. Sealer and Wax: Types recommended by floor material manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify concrete floors are dry to maximum moisture content as recommended by manufacturer, and exhibit negative alkalinity, carbonization, and dusting.

3.2 PREPARATION

A. Clean substrate.

B. Fill minor low spots and other defects with sub-floor filler.

C. Apply primer as required to prevent "bleed-thru" or interference with adhesion by substances that cannot be removed.

3.3 INSTALLATION

A. Spread adhesive and set flooring in place. Press sheet flooring with 150-pound roller and tile flooring to attain full adhesion.

B. Install tile flooring with joints and seams parallel to building lines. Allow minimum 1/2 full size tile width at room or area perimeter.

C. Scribe flooring to produce tight joints at items penetrating flooring.

D. Where floor finishes are different on opposite sides of door, terminate flooring under centerline of door.

E. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.

F. Adhere base tight to wall and floor surfaces.

G. Fit joints tightly and make vertical. Miter internal corners. At external corners, use pre-molded units.

1.0 CLEANING

A. Remove excess adhesive from surfaces without damage.

END OF SECTION

SECTION 09900

PAINTS AND COATINGS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes surface preparation and field application of paints and other coatings.

1.2 SUBMITTALS

A. Product Data: Submit data on finishing products.

B. Samples: Submit paper chip samples, 3 x 5 inch in size illustrating range of colors available for each surface finishing product scheduled.

1.3 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit coating maintenance manual including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.

1.4 QUALITY ASSURANCE

A. Surface Burning Characteristics:
   1. Fire Retardant Finishes: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84 and NFPA 255.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Store and apply materials in environmental conditions required by manufacturer's instructions.

PART 2 PRODUCTS

2.1 PAINTS AND COATINGS

A. Approved Manufacturers:
   1. Coronado Paints.
   2. The Glidden Company.
   3. Sherwin Williams.
   4. Benjamin Moore.

2.2 COMPONENTS

A. Coatings: Ready mixed except field catalyzed coatings of good flow and brushing properties, capable of drying or curing free of streaks or sags.
   1. Interior Flat and Non-Flat Paints: Maximum volatile organic compound content in accordance with GS-11.

B. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials required to achieve finishes specified.

2.3 EXTERIOR FINISHES

A. Steel - Shop Primed, Galvanized:
   1. First Coat: Rust inhibiting primer.
      a. Sherwin-Williams: Pro Industrial Pro Cryl Universal Primer, B66 Series
   2. Second and Third Coats: Acrylic enamel, semi-gloss.
      a. Sherwin-Williams: Pro Industrial Acrylic Semi-Gloss, B66 Series

2.4 INTERIOR FINISHES

A. Steel – Unprimed, shop primed, galvanized.
   1. First Coat: Rust inhibiting primer.
      a. Sherwin-Williams: Pro Industrial Pro Cryl Universal Primer, B66 Series
   2. Second and Third Coats: Acrylic enamel, semi-gloss.
      a. Sherwin-Williams: Pro Industrial Acrylic Semi-Gloss, B66 Series

B. Steel – Unprimed, shop primed, galvanized: Doors, handrails.
   1. First Coat: Rust inhibiting primer.
      a. Sherwin-Williams: Pro Industrial Pro Cryl Universal Primer, B66 Series
   2. Second and Third Coats: Acrylic enamel, semi-gloss.
      a. Sherwin-Williams: Pro Industrial Waterbased Alkyd Urethane Semi-Gloss, B53 Series

C. Plaster, Gypsum Board: Walls.
   1. First Coat: Latex primer sealer.
      a. Sherwin-Williams: ProMar 200 Zero VOC Interior Latex Primer, B28
   2. Second and Third Coats: Latex acrylic enamel, eggshell.
      a. Sherwin-Williams: ProMar 200 Zero VOC Interior Latex Eg-shel, B20 Series

D. Plaster, Gypsum Board: High Performance Walls.
Note: For walls in high traffic, moisture or cleaning areas.
   1. First Coat: Latex primer sealer.
      a. Sherwin-Williams: ProMar 200 Zero VOC Interior Latex Primer, B28
   2. Second and Third Coats: Latex acrylic enamel, eggshell.
      a. Sherwin-Williams: Pro Industrial Pre Catalyzed Waterbased Epoxy Eg-shel, K45 Series

E. Plaster, Gypsum Board: Ceilings.
   1. First Coat: Latex primer sealer
      a. Sherwin-Williams: ProMar 200 Zero VOC Interior Latex Primer, B28
   2. Second and Third Coats: Latex acrylic enamel, flat.
      a. Sherwin-Williams: ProMar 200 Zero VOC Interior Latex Flat, B30 Series

F. CMU.
   1. First Coat: Block filler
      a. Sherwin-Williams: PrepRite Block Filler, B25 Series
   2. Second and Third Coats: Latex acrylic enamel, eggshell.
      a. Sherwin-Williams: ProMar 200 Zero VOC Interior Latex Eg-shel, B20 Series

G. CMU: High Performance. (Kitchen, Dishware, Serving, J.C.)
1. First Coat: Block filler
a. Sherwin-Williams: PrepRite Block Filler, B25 Series
2. Second and Third Coats: Latex acrylic enamel, eggshell.
a. Sherwin-Williams: Pro Industrial Pre Catalyzed Waterbased Epoxy, Eg-shel, K45 Series

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify substrate conditions are ready to receive Work.

B. Measure moisture content of porous surfaces using electronic moisture meter. Do not apply finishes unless moisture content is less than 12 percent.

3.2 PREPARATION

A. Correct minor defects and clean surfaces affecting work of this section.

B. Remove electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or applying finishes.

C. Gypsum Board Surfaces: Fill minor defects with filler compound. Spot prime defects after repair.

D. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.

E. Concrete and Unit Masonry Surfaces Scheduled to Receive Paint Finish: Remove foreign matter. Remove oil and grease with solution of tri-sodium phosphate, rinse well and allow to dry.

F. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Clean surfaces with solvent. Prime bare steel surfaces.

G. Interior Wood Items Scheduled to Receive Paint Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.

3.3 APPLICATION

A. Sand wood and metal surfaces lightly between coats to achieve required finish.

B. Where clear finishes are required, tint fillers to match wood.

C. Prime concealed surfaces of interior woodwork with primer paint.

D. Prime concealed surfaces of interior wood surfaces scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with thinner.

E. Finishing Mechanical And Electrical Equipment:
   1. Refer to Mechanical and Electrical Sections for schedule of color coding, identification banding of equipment, duct work piping, and conduit.
   2. Color code items in accordance with color schedule. Color band and identify with flow arrows and names.
   3. Paint shop primed equipment.
   4. Remove unfinished louvers, grilles, covers, and access panels and paint separately. Paint dampers exposed behind louvers, grilles, convector and baseboard cabinets to match face panels.
   5. Prime and paint insulated and exposed pipes, insulated and exposed ducts, hangers, brackets, collars and supports, except where items are prefinished.
   6. Paint interior surfaces of air ducts visible through grilles and louvers with one coat of flat black paint to visible surfaces.
   7. Paint exposed conduit and electrical equipment occurring in finished areas.
   8. Paint both sides and edges of plywood backboards.
   9. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

F. Cleaning: As work proceeds, promptly remove finishes where spilled, splashed, or spattered.

3.4 SCHEDULE - OF COLORS

A. Refer to schedule of finishes, Sheet A3.0.

END OF SECTION

SECTION 10800

TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes toilet washroom accessories.

1.2 SUBMITTALS

A. Product Data: Submit data on accessories describing size, finish, details of function, attachment methods.

PART 2 PRODUCTS

2.1 TOILET, BATH AND LAUNDRY ACCESSORIES

A. Manufacturers:
1. American Specialties, Inc.
2. Bobrick.
3. Bradley Corp.
4. Acorn Penal-Ware ADA 2010 Lav/Toilet-Combi-Offset Toilet Bowl

2.2 COMPONENTS

A. Products listed in Schedule are made by American Specialties, Inc., unless noted otherwise.

B. Furnish two keys for each accessory to Owner. Master key accessories.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify exact location of accessories for installation.

3.2 PREPARATION

A. Deliver inserts and rough-in frames to site. Provide templates and rough-in measurements.

B. See Section 06100 for installation of blocking in walls and ceilings.

3.3 INSTALLATION

A. Install plumb and level, securely and rigidly anchored to substrate.

B. Mounting Heights and Locations: As required by accessibility regulations and as indicated on Drawings.

3.4 SCHEDULES

A. Grab Bars: Satin stainless steel, concealed mounting, 3011 series, 42” long, 36” long and 18” long, One each in Womens 101 and Mens 102.

B. Mirrors: Satin stainless steel, 0600 series, 24”x36”, locate one above each lavatory wash basin in Womens 101 and Mens 102.

C. Soap Dispenser to be provided by owner.

D. Toilet Paper Dispenser to be provided by owner.

END OF SECTION