



REQUEST FOR BIDS

SEHS Women's Locker Room Remodel 2018

EUGENE SCHOOL DISTRICT 4J

EUGENE, OREGON

Project # 410-660-003

Return by: **Tuesday, April 17, 2018**
2:00 p.m.
No faxed or electronic quotes will be accepted.

Mailing Address: Facilities Management
715 West 4th Avenue
Eugene, Oregon 97402

Phone: (541) 790-7400

Specification Prepared by:
Michael Heffernan, AIA
4J District Architect

DATE ISSUED:
Thursday, March 22, 2018

DOCUMENT 00 01 01
TITLE PAGE

PROJECT MANUAL:

SEHS Women's Locker Rm Remodel 2018
Eugene Public School District 4J
Eugene, Oregon 97402

OWNER:

Eugene School District 4J
715 West 4th Ave.
Eugene, Oregon 97402

CONTACT:

Project Manager: Dexter Rummel
(541) 790-7424 Office
rummel_d@4j.lane.edu

ARCHITECT:

Rodd Hansen Architect
1551 Oak Street, Suite A
Project Architect: Rodd Hansen
(541) 790-7422

DISTRICT ENGINEER:

4J School District
715 West 4th Ave.
Project Engineer: Gary Heldt
(541) 790-7422

STRUCTURAL ENGINEER:

Ausland Group
321 Mill Street, Ste: #3
Structural Engineer: Scott Metzler
(541) 345-1094

SPECIFICATIONS:

4J School District
715 West 4th Ave.
Michael Heffernan, AIA
(541) 790-7405

DOCUMENT 00 01 10
PROJECT MANUAL TABLE OF CONTENTS
 SEHS Women's Locker room Remodel

The following is a list of all Divisions, Sections, and Drawings which are included in the Project Manual

INTRODUCTORY PAGES **PAGES**

	Cover Page	1
Document 00 01 01	Title Page	1
Document 00 01 10	Table of Contents	2

DIVISION 00 BIDDING AND CONTRACT REQUIREMENTS

	Invitation to Bid	1
Document 00 21 13	Instructions to Bidders, AIA Document A701	6
Document 00 22 13	Supplementary Instructions to Bidders	4
Document 00 41 13	Bid Form	5
Document 00 45 22	First Tier Subcontractor Disclosure Form	1
Document 00 52 13	Form of Agreement	1
Document 00 72 13	General Conditions, AIA Document A201	39
Document 00 73 00	Supplementary Conditions	16
Document 00 73 43	Prevailing Wage Rates for Public Contracts in Oregon Effective (Jan. 2018)	1

DIVISION 01 GENERAL REQUIREMENTS

	Summary of Work	6
Section 01 25 00	Contract Modification Procedures (CR/PO Form)	4
Section 01 29 00	Payment Procedures	3
Section 01 31 00	Project Management and Coordination	8
Section 01 32 00	Construction Progress Documentation	3
Section 01 33 00	Submittal Procedures	7
Section 01 40 00	Quality Requirements	4
Section 01 50 00	Temporary Facilities and Controls	6
Section 01 60 00	Product Requirements (Substitution Request Form)	5
Section 01 73 00	Execution Requirements	7
Section 01 73 29	Cutting and Patching	4
Section 01 77 00	Closeout Procedures	5
Section 01 78 23	Operation and Maintenance Data	8
Section 01 78 39	Project Record Documents	3

DIVISION(S) TECHNICAL SPECIFICATIONS

	Demolition	3
Section 06 10 00	Rough Carpentry	4
Section 06 20 00	Finish Carpentry	2
Section 07 21 00	Batt and Blanket Insulation	2
Section 07 90 00	Joint Sealants	7
Section 08 11 00	Hollow Metal Doors and Frames	4

DIVISION(S) TECHNICAL SPECIFICATIONS (Cont.)

TABLE OF CONTENTS – SECTION 00 01 10

Section 08 70 00	Door Hardware	7
Section 09 65 00	Resilient Floor Base	3
Section 09 90 00	Painting	7
Section 10 51 00	Lockers	3
Section 10 17 00	Plastic Toilet Compartments	3
Section 10 80 00	Toilet and Bath Accessories	4
Section 22 05 00	Common Work Results for Plumbing & Fixture Schedule	10
Section 23 31 00	Ductwork	2
Section 26 05 00	Basic Electrical Materials and Methods	4
Section 26 12 00	Wires & Cables	2
Section 26 13 00	Raceways	2
Section 26 14 00	Switches & Receptacles	1
Section 26 72 00	Fire Alarm	2

ARCHITECTURAL DRAWINGS:

Sheet A0.1	Title Sheet	1
Sheet A0.2	ADA Sheet	1
Sheet CS.1	Code Summary Sheet (Not included in Bid Set)	1
Sheet A1.1	Architectural Site Plan	1
Sheet A2.1	First Floor Demolition Plan	1
Sheet A3.1	First Floor Plan	1
Sheet A5.1	Building Sections	1
Sheet A8.1	Enlarged Restroom Plans	1
Sheet A9.1	Door & Finish Schedules	1
Sheet A9.2	Door Frame Details	1

STRUCTURAL DRAWINGS:

Sheet S-101	Structural Plan & Details	1
Sheet S-102	Framing Details	1

ELECTRICAL DRAWINGS: 1

Sheet E-1	Electrical Plan
Sheet E-2	Lighting Plan

PLUMBING / MECHANICAL DRAWINGS: 1

Sheet P-1	Basement Plumbing demolition Plan
Sheet P-2	Basement Plumbing New Plan
Sheet P-3	First Floor Plumbing Plan
Sheet M-1	Mechanical Plan
Sheet M-2	Mechanical Roof Plan

DOCUMENT 00 11 13
INVITATION TO BID

Sealed bids will be received by Amanda Clinton, Facilities Management Assistant, for the SEHS Women's Locker Rm Remodel 2018 project on Tuesday April 17 until the Deadline for Bid Submission at 2PM, at the Eugene School District 4J Facilities Management Office, 715 West Fourth Avenue, Eugene, Oregon 97402. The Bids will be opened publicly and read aloud immediately after the deadline for submission of bids. Late Bids will not be considered.

The project consists of relocating existing lockers, cutting a new door into an existing wall, removing a wall & installing beams & columns, building a small vestibule with gyp & stud walls, adding as well as renovating an existing restroom. New accessible fixtures will be installed, as well as accessible grab bars & dispensers, signage, etc. Minor mechanical, electrical, fire alarm & roofing work will also be required.

Beginning Thursday March 22, Prime Bidders, Sub-bidders and Suppliers may obtain bidding documents at the following hyperlink: <http://www.4j.lane.edu/bids/>. Hard copies are not provided by the School District. It is the responsibility of all Prime Bidders, Sub-bidders, and Suppliers to obtain Bidding Documents and all Addenda from the hyperlink.

Bidders and Suppliers may also obtain bidding documents from Central Print and Reprographic Services, 45 West 5th Ave, Eugene, Oregon, by paying the cost of reproduction. It is the responsibility of those obtaining Bidding Documents in this manner to obtain any and all addenda from the hyperlink or the Plan Centers.

Bidding Documents may be examined at the following locations:

Eugene Builder's Exchange, 2460 W. 11th, Eugene, OR 97402
Premier Builders Exchange, 1902 NE 4th Street, Bend, OR 97701
Dodge Data & Analytics, digital only – www.construction.com
Daily Journal of Commerce Plan Center, 921 S.W. Washington St., Suite 210, Portland, OR 97205-2810
Douglas Plan Center, 3076 NE Diamond Lake Blvd, Roseburg, OR 97470
Contractor Plan Center, 5468 SE International Way, Milwaukie, OR 97222
Salem Contractor's Exchange, 2256 Judson Street SE, Salem, OR 97302
Willamette Valley Bid Center, 135 2nd Ave. SE, Albany, OR 97321

A **mandatory** pre-bid conference and walk-through has been scheduled for Thursday March 29 at 2pm. The location of the conference will be starting in the front Office of the school. Statements made by the District's representatives at the conference are not binding upon the District unless confirmed by Written Addendum. Pre-qualification of bidders is not required.

Each Bid must be submitted on the prescribed form and accompanied by a Surety Bond, Cashiers Check, or Certified Check, executed in favor of Eugene School District 4J, in the amount not less than ten percent (10%) of the total bid, based upon the total bid amount for those items bid upon.

Either with the Bid or within two working hours of the Deadline for Submission of Bids, bidders shall submit, on the form provided, information regarding first-tier subcontractors furnishing labor or labor and materials, as provided in ORS 279C.370. Bids for which disclosure forms are required, but not submitted, will be rejected.

No bid for a construction contract will be received or considered unless the Bidder is registered with the Construction Contractors Board or licensed by the State Landscape Contractors Board at the time the Bid is made, as required by OAR 137-049-0230. [A license to work with asbestos-containing materials under ORS 468A.720 is not required for this project.]

INVITATION TO BID – SECTION 01 11 13

For every bid \$100,000 or greater, all Contractors and Subcontractors shall have a public works bond, in the amount of \$30,000, filed with the Construction Contractors' Board (CCB), before starting work on the project, unless exempt. A copy of the Contractors' BOLI Public Works Bond shall be provided with the executed contract documents.

Each Bid shall contain a statement indicating whether the Bidder is a "resident bidder", as defined in ORS 279A.120.

Each Bid shall contain a statement that the "Contractor agrees to be bound by and will comply with the provisions of ORS 279C.800 through 279C.870 regarding payment of Prevailing Wages".

Contractor shall certify nondiscrimination in obtaining required subcontractors, in accordance with ORS 279A.110(4).

School District 4J reserves the right to (1) reject any or all Bids not in compliance with all public bidding procedures and requirements, (2) postpone award of the Contract for a period not to exceed sixty (60) days from the date of bid opening, (3) waive informalities in the Bids, (4) select the Bid which appears to be in the best interest of the District, or (5) reject any or all bids.

Date: March 23, 2018

By: Amanda Clinton, Facilities Management Assistant

Published: Register Guard, Daily Journal of Commerce, ORPIN (Oregon Procurement Information Network)

Posted: School District 4J Administration Office
School District 4J Hyperlink: <http://www.4j.lane.edu/bids/>
200 North Monroe
Eugene, OR 97403

DOCUMENT 00 21 13
INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

STANDARD FORM

Instructions to Bidders - AIA Document A701, 1997 Edition, immediately following are part of this Project Manual.

END OF DOCUMENT 00 21 13

DOCUMENT 00 22 13
SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

The following Supplementary Instructions to Bidders modify, change from or add to AIA Document A701 Instruction to Bidders, 1997 Edition. Where any Article of the Instructions to Bidders is modified or any paragraph, subparagraph, or clause thereof is modified or deleted by these Supplementary Instructions to Bidders, the unaltered provisions of that Article, paragraph, subparagraph, or clause shall remain in effect.

1.1 ARTICLE 2 BIDDER'S REPRESENTATIONS

A. Add the following subparagraphs to 2.1.3:

2.1.3.1 Bidders are required to attend any mandatory pre-bid conferences or tours as stated in the Advertisement for Bids. Bidders not attending this pre-bid conference and tour shall be disqualified from bidding. Bidders will be required to sign in at the project site prior to the conference or tour.

2.1.3.2 Bidders are encouraged to visit the site(s) to become familiar with existing conditions. The Owner is not responsible and shall not bear financial burden for oversights made by the Bidder for failure to inspect sites prior to submitting a bid.

2.1.3.3 In all cases, persons wishing to examine the area of work must sign in at the school office prior to visiting the work area. Prior to leaving the school, sign-out at the office is required.

2.1.3.4 If access is required at times when the school office is not staffed, contact the Facilities Office, 541-790-7417, for assistance.

B. Add the following paragraph 2.1.5:

2.1.5 The Bidder certifies by signing the Bid that the Bidder has a drug-testing program in place for its employees that includes, at a minimum, the following:

- .1 A written employee drug-testing program,
- .2 Required drug testing for all new Subject Employees, or alternatively, requiring testing of Subject Employees every six months on a random selection basis,
- .3 Required testing of a Subject Employee when the Contractor has reasonable cause to believe the Subject Employee is under the influence of drugs, and
- .4 Required testing of a Subject Employee when the Subject Employee is involved in: (I) an incident causing an injury requiring treatment by a physician, or (ii) an incident resulting in damage to property or equipment.

A drug-testing program that meets the above requirements will be deemed a "Qualifying Employee Drug-testing Program". For purposes of this rule an employee is a "Subject Employee" only if that employee will be working on the Project job site; and

That if awarded the Public Improvement Contract, the Bidder will execute a contract in which the Contractor shall represent and warrant to the District that the Qualifying Employee Drug-testing Program is in place at the time of contract execution and will continue in full force and effect for the duration of the Public Improvement Contract; and that the Contract will condition the Agency's performance obligation upon the Contractor's compliance with this representation and warranty; and

That the Public Improvement Contract shall contain Contractor's covenant requiring each subcontractor providing labor for the Project to:

- .1 Demonstrate to the Contractor that it has a Qualifying Employee Drug-testing Program for the subcontractor's Subject Employees, and represent and warrant to the Contractor that the Qualifying Employee Drug-testing Program is in place at the time of subcontract execution and will continue in full force and effect for the duration of the subcontract; or
- .2 Require the subcontractor's Subject Employees to participate in the Contractor's Qualifying Employee Drug-testing Program for the duration of the subcontract.

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS – DOCUMENT 00 22 13

1.2 ARTICLE 3 BIDDING DOCUMENTS

A. 3.3 SUBSTITUTIONS

1. Add the following:

3.3.2.1 All requests for approval must be submitted in duplicate on "Substitution Request Form". Include a self-addressed stamped envelope. Requests received by Architect less than ten (10) days prior to bid will not be considered.

B. 3.4 ADDENDA

1. Delete paragraph 3.4.1 and substitute the following:

3.4.1 Addenda will be issued to plan centers listed in the Advertisement for Bids and all firms listed on the Planholder List.

1.3 ARTICLE 4 BIDDING PROCEDURES

A. 4.1 PREPARATION OF BIDS

1. Add the following Paragraphs:

4.1.8 Bidders shall certify to non-collusion practices on the form included as part of the Bid Form, to be submitted with the Bid Form.

.1 A Non-Collusion Affidavit is required for any contract awarded pursuant to the bid. According to the Oregon Public Contracts and Purchasing Laws, a public contracting agency may reject any or all bids upon a finding of the agency that it is in the public interest to do so (ORS 279C.395). This agency finds that it is in the public interest to require the completion of this affidavit by potential contractors.

.2 The Non-Collusion Affidavit must be executed by the member, officer or employee of the bidder who makes the final decision on prices and the amount quoted in the bid.

.3 Bid rigging and other efforts to restrain competition, and the making of false sworn statements in connection with the submission of bids are unlawful and may be subject to criminal prosecution. The person who signs the Affidavit should examine it carefully before signing and assure himself or herself that each statement is true and accurate, making diligent inquiry, as necessary, of all other persons employed by or associated with the bidder with responsibilities for the preparation approval or submission of the bid.

.4 In the case of a bid submitted by a joint venture, each party to the venture must be identified in the bid documents, and an Affidavit must be submitted separately on behalf of each party.

.5 The term "complementary bid" as used in the Affidavit has the meaning commonly associated with the term in the bidding process, and includes the knowing submission of bids higher than the bid of another firm, any intentionally high or noncompetitive bid, and any other form of bid submitted for the purpose of giving a false appearance of competition.

.6 Failure to file an Affidavit in compliance with these instructions will result in disqualification of the bid.

4.1.9 Bidders shall certify to non-discrimination in employment practices on the form, included as part of the Bid Form, to be submitted with the Bid Form. By submitting its bid, the Bidder certifies conformance to the applicable federal acts, executive orders, and Oregon statutes and regulations concerning affirmative action toward equal employment opportunities. All information and reports required by the federal or Oregon state governments having responsibility for the enforcement of such laws shall be supplied to the Owner in compliance with such acts, regulation, and orders.

.1 Failure to file an Affidavit in compliance with these instructions will result in disqualification of the bid.

4.1.10 Bidder shall indicate, on the Bid Form where provided, the bidder's status as a "resident" or "non-resident" in accordance with ORS 279C.365 and ORS 279A.120.

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS – DOCUMENT 00 22 13

4.1.11 First-Tier Subcontractor Disclosure:

.1 Within two working hours after the date and time of the deadline when the bids are due, a Bidder shall submit to the District a disclosure of the first-tier subcontractors that will be furnishing labor or will be furnishing labor and materials in connection with the public improvement; and will have a contract value that is equal to or greater than 5% of the project bid or \$15,000, whichever is greater, or \$350,000, regardless of the percentage of the total project bid.

.2 The disclosure of first-tier subcontractors shall include the name of each subcontractor, the category of work that the subcontractor would be performing, and the dollar value of each subcontract.

.3 The first-tier subcontractor disclosure applies only to public improvements with a contract value of more than \$100,000.

.4 The District will consider the bid of any contractor that does not submit a required subcontractor disclosure to the District to be a non-responsive bid. A non-responsive Bid will not be considered for Award.

.5 Contractor shall certify that all subcontractors performing Work are registered with the Construction Contractors Board or licensed by the State Landscape Contractors Board in accordance with ORS 701.035 to 701.055 before the subcontractors commence work under the Contract.

B. 4.2 BID SECURITY

1. Delete paragraphs 4.2.2 and 4.2.3 and substitute the following:

4.2.2 Each Bid shall be accompanied by a surety bond, cashiers check, or certified check, executed in favor of Eugene School District 4J, in the amount not less than ten percent (10%) of the total bid, based upon the total bid amount for those items bid upon. Should the Bidder refuse to enter into such Contract or fail to furnish Performance and Labor and Materials Payment Bonds and Certificates of Insurance as required by the Supplementary Conditions within ten (10) working days after contract forms are provided to the Bidder, the amount of the Bid Security may be forfeited to the Owner as liquidated damages, not as a penalty.

.1 The Surety Bond shall be written by a Bonding Company authorized and licensed by the Oregon Insurance Commissioner. The bonding company must be listed on the most current US Government Treasury List, Department Circular 570, or approved PRIOR TO BID SUBMISSION by the Eugene School District 4J's Risk Manager. The Bond shall be on a AIA Document A310, most current edition. The Attorney-in-Fact who executes the Bond on behalf of the Surety shall affix to the Bond, a certified copy of a power of attorney.

.2 The Owner will have the right to retain the Bid Security of Bidders until either; a) the Contract has been executed and Bonds have been furnished, or b) the specified time has elapsed so that Bids may be withdrawn, or c) all Bids have been rejected.

C. 4.4 MODIFICATION OR WITHDRAWAL OF BID

1. Delete paragraph 4.4.1 and substitute the following:

4.4.1 A Bid may not be withdrawn or canceled by the Bidder following the time and date designated for the receipt of bids to the expiration of a 60 day period. The Bid for that sixty days is irrevocable and each Bidder so agrees in submitting a Bid.

1.4 ARTICLE 6 POST-BID INFORMATION

A. Delete Paragraph 6.1.

B. Modify paragraph 6.3.1 as follows:

In the first sentence delete the phrase "as soon as practicable" and add "within 48 hours."

C. Add the following:

6.3.1.4 Where asbestos abatement is required, Contractor or appropriate subcontractor shall be licensed by the Department of Environmental Quality to perform "asbestos abatement work", per OAR 340-248-0120,

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS – DOCUMENT 00 22 13

Adopted 1/25/90, and meet requirements of AHERA as specified in the Federal Register, 40 CFR part 763. Bidder shall submit evidence of licensing to Owner.

1.5 ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

A. 7.1 BOND REQUIREMENTS

1. Delete paragraphs 7.1.1, 7.1.2 and 7.1.3 and add the following:

7.1.1 Unless otherwise stated in the solicitation document, prior to execution of the Agreement, the successful Bidder shall furnish a separate Performance Bond and a Labor Bond and Materials Payment Bond that in all respects conform to the requirements of ORS 279C.380 covering faithful performance of the Contract, and the payment of all obligations arising thereunder, each in an amount equal to one hundred percent (100%) of the Contract sum. The duration of the performance bond shall match the length of the project warranty.

7.1.2 Bonds shall be submitted on AIA Document A312, latest edition.

7.1.3 The surety issuing such bonds shall be duly authorized and licensed to issue bonds in the State of Oregon. The bonds shall be executed by an attorney-in-fact, principal or other authorized representative for the surety company, showing the Oregon agent for service, and bears the seal of the surety company. Where the bond is executed by a person outside the state of Oregon, his authority to execute bonds shall be shown. The Bonds shall be fully executed, payable to the Owner.

7.1.4 The cost of furnishing such bonds shall be included in the Bid.

B. BOLI Public Works Bond:

1. Add the following:

Pursuant to ORS 279C.836, for any contract awarded where the contract price is \$100,000.00 or greater, the Contractor and every subcontractor shall have a Public Works bond filed with the Construction Contractors Board before starting work on the project. This bond is in addition to performance bond and payment bond requirements. A copy of the Contractor's BOLI Public Works Bond shall be provided with the executed contract.

1.2 TIME OF DELIVERY AND FORM OF BONDS

A. Delete paragraph 7.2.1 and substitute the following:

7.2.1 The successful Bidder will be provided with contract forms through the Architect. These forms shall be executed and delivered to the Owner, along with Performance Bond and Labor and Material Payment Bond, within ten (10) days after receiving forms.

B. Add the following article:

ARTICLE 9 MISCELLANEOUS PROVISIONS

9.1 ADMINISTRATIVE RULES

All bidders are required to comply with the provisions of Oregon Revised Statutes and 4J Board Policy. Attention is directed to ORS 244, Government Ethics; ORS 279A and 279C, Public Contracting Code; Oregon Administrative Rules, Chapter 137, Divisions 46, 48 and 49; and 4J Board Policy DJC.

9.2 PROTEST OF BID

Protests of bid specifications or contract terms shall be presented to the Owner in writing five (5) calendar days prior to bid opening. Such protest or request for change shall include the reason for protest or request, and any proposed changes to specifications or terms. No protest against award because of the content of bid specifications or contract terms shall be considered after the deadline established for submitting such protest.

9.3 PROTEST OF AWARD

Any actual bidder or proposer who is adversely affected by the Owner's notice of award of the contract to another bidder or proposer on the same solicitation shall have seventy two (72) hours from the notice of award to submit to the Owner, a written protest of the notice of award. In order to be an adversely affected or aggrieved bidder or proposer with a right to submit a written protest, a bidder or proposer must itself claim to

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS – DOCUMENT 00 22 13

be eligible for award of the contract as the lowest responsible bidder or best proposer and must be next in line for award.

9.4 FINAL AWARD

The written notice of award of the contract shall constitute a final decision of the Owner to award the contract if no written protest of the notice of award is filed with the Owner within the designated time.

END OF DOCUMENT 00 22 13

DOCUMENT 00 41 13
BID FORM

BID FOR: SEHS Women’s Locker room Remodel

Submitted to: Facilities Management
Eugene School District 4J
715 West Fourth Avenue
Eugene, Oregon 97402

Bid Deadline: 2 PM
Tues. April 17

Submitted by: _____
(Company Name)

BASE BID

The undersigned proposes to furnish all material, equipment, and labor required for the complete project, and to perform all work in strict accordance with the Contract Documents for the lump sum prices indicated below with completion occurring on or prior to the dates indicated:

BASE BID:

Bid: _____ \$ _____
(Words) (Figures)

The undersigned agrees, if awarded the Contract, to substantially complete all Base Bid work on or before the dates specified in Section 01 11 00.

ALTERNATE BIDS

The Undersigned proposes to **add to** the Base Bid indicated above the items of work relating to the following Alternates as described in the Project Manual, Section 01 23 00.

ALTERNATE NO. 1:

(None)

Bid: _____ \$ _____
(Words) (Figures)

The undersigned agrees, if awarded the Contract, to substantially complete all Alternate No. 1 work on or before dates specified in Section 01 11 00.

It is understood that the Base Bid may be adjusted for any alternates in determining the amount of the Contract. Any or all of such Alternates may be accepted or reinstated by the Owner at any time within 60 days from the date of the Contract Award by the Owner, at the respective amounts named herein.

BID SECURITY

Accompanying herewith is Bid Security, which is not less than ten percent (10%) of the total amount of the Base Bid plus additive alternates.

UNIT PRICES

The following Unit Prices are submitted by the Undersigned as a proposed basis for additive or deductive adjustments to the Bid Amount in the event quantity changes are required for the items listed. It is understood and agreed that these Unit Prices are separately subject to acceptance by the Owner and will thereafter be entered into the Agreement. The Unit Prices are to include all labor, travel and material costs.

Bid: **(None)** _____ \$ _____ per
(ITEM) (UNIT)

STIPULATIONS

The undersigned acknowledges the liquidated damages provision included in the Supplementary Conditions.

The undersigned agrees, if awarded the contract, to comply with the provisions of Oregon Revised Statutes 279C.800 through 279C.870 pertaining to the payment of prevailing rates of wage.

The undersigned agrees if awarded the contract to comply with Oregon Revised Statutes 326.603 giving the Owner authority to obtain fingerprints and criminal records check of Contractors, their employees, and subcontractors providing labor for the Project.

The undersigned agrees, if awarded the Contract, to execute and deliver to the Owner within ten (10) working days after receiving contract forms, a signed Agreement and a satisfactory Performance Bond and Payment Bond each in an amount equal to 100 percent (100%) of the Contract Sum.

For every Agreement of \$100,000 or greater in value, all Contractors and Subcontractors shall have a public works bond in the amount of \$30,000, filed with the Construction Contractors’ Board (CCB), in compliance with ORS 279C.836, before starting work on the project unless exempt. Contractor agrees to provide a copy of the Contractor’s BOLI Public Works bond with the signed Agreement as Specified in the Supplementary Conditions.

The undersigned agrees that the Bid Security accompanying this proposal is the measure of liquidated damages which the Owner will sustain by the failure of the undersigned to execute and deliver the above named agreement and bonds; and that if the undersigned defaults in executing that agreement within ten (10) days after forms are provided or providing the bonds, then the Bid Security shall become the property of the Owner; but if this proposal is not accepted within sixty (60) days of the time set for the opening of bids, or if the undersigned executes and delivers said agreement and bonds, the Bid Security shall be returned.

By submitting this Bid, the Bidder certifies that the Bidder:

- a) has available the appropriate financial, material, equipment, facility and personnel resources and expertise, or the ability to obtain the resources and expertise, necessary to meet all contractual responsibilities;
- b) has a satisfactory record of past performance;
- c) has a satisfactory record of integrity, and is not disqualified under ORS 279C.440;
- d) is qualified legally to contract with the Owner; and
- e) will promptly supply all necessary information in connection with any inquiry the Owner may make concerning the responsibility of the Bidder.

Prior to award of a Contract, the Bidder shall submit appropriate documentation to allow the Owner to determine whether or not the Bidder is “responsible” according to the above criteria.

The contractor agrees with the provisions of Oregon Revised Statutes 279C.505, which requires that the contractor shall demonstrate it has established a drug-testing program for employees and will require each subcontractor providing labor for the Project to do the same.

The undersigned has received addenda numbers _____ to _____ inclusive and has included their provisions in the above Bid amounts.

The undersigned has visited the site to become familiar with conditions under which the Work is to be performed and **SEHS Women’s Locker Rm Remodel**

has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.

The undersigned certifies that the Bidder is a _____ Bidder under ORS. ("Resident" or "Non-resident", to be filled in by Bidder)

Names of Firm: _____

Street Address: _____
(City) (State) (Zip)

Telephone Number: _____ FAX Number: _____

Email Address: _____

Signed By: _____ Printed Name: _____
(Signature of Authorized Official. If bid is from a partnership, one of the partners must sign bid).

Date Signed: _____

Official Capacity: _____

If corporation, attest: _____ Date: _____
(Secretary of Corporation)

SEAL (If Corporate)

- _____ Corporation
- _____ Partnership
- _____ Individual

Enclosed: Bid Security

NON-DISCRIMINATION REQUIREMENT

Contractor certifies that the Contractor has not discriminated against minorities, women or emerging small business enterprises in obtaining any required subcontracts.

The Contractor agrees not to discriminate against any client, employee, or applicant for employment or for services, because of race, color, religion, sex, national origin, physical or mental handicap, sexual orientation or age, unless based upon bona fide occupational qualifications, and that they are otherwise in compliance with all federal, state and local laws prohibiting discrimination, with regard to, but not limited to, the following: Employment upgrading, demotion or transfer; Recruitment or recruitment advertising; Layoffs or termination; Rates of pay or other forms of compensation; Selection for training; Rendition of services. It is further understood that any vendor who is in violation of this clause shall be barred forthwith from receiving awards of any purchase order from the School District, unless a satisfactory showing is made that discriminatory practices have terminated and that a recurrence of such acts is unlikely.

FIRM NAME: _____

ADDRESS: _____

TELEPHONE: _____

BY: _____
(Company or Firm Officer)

BY: _____
(Type or Print Name)

NON-COLLUSION AFFIDAVIT

STATE OF _____)

County of _____)

I state that I am _____ of _____
(Title) (Name of Firm)

and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and officers. I am the person responsible in my firm for the price(s) and the amount of this bid.

I state that:

(1) The price(s) and amount of this bid have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder or potential bidder, except as disclosed on the attached appendix.

(2) That neither the price(s) nor the amount of this bid, and neither the approximate price(s) nor approximate amount of this bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before bid opening.

(3) No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.

(4) The bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or noncompetitive bid.

(5) _____, its affiliates, subsidiaries, officers, directors and
(Name of my Firm)

employees are not currently under investigation by any governmental agency and have not in the last four years been convicted of or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as described on the attached appendix.

I state that _____ understands and acknowledges that the above representations
(Name of my Firm)

are material and important, and will be relied on by School District 4J in awarding the contract(s) for which this bid is submitted. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from School District 4J of the true facts relating to the submission of bids for this contract.

(Authorized Signature)

Sworn to and subscribed before me this ____ day of _____, 20

(Notary Public for Oregon)

My Commission Expires: _____

END OF BID FORM

DOCUMENT 00 45 22
FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

PROJECT: SEHS Women's Locker Rm Remodel

CIP NUMBER: 410-660-003

TO: Amanda Clinton, Facilities Management Assistant
Eugene School District 4J
715 West Fourth Avenue
Eugene, Oregon 97402

BID SUBMISSION DEADLINE: **Date:** _____ **Time:** _____

SUBMITTAL REQUIREMENTS

Subcontractor disclosure is required on all public improvement contracts greater than \$100,000.

This form must be submitted at the location specified in the Invitation to Bid on the advertised bid closing date and within two working hours after the advertised bid closing time.

List below the name of each subcontractor that will be furnishing labor or labor and materials, and that is required to be disclosed, the category of work that the subcontractor will be performing, and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED.)

SUBCONTRACTOR	DOLLAR VALUE	CATEGORY OF WORK
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

The above listed first- tier subcontractor(s) are providing labor, or labor and material, with a Dollar Value equal to or greater than:

- a) 5% of the total Contract Price, but at least \$15,000. [If the Dollar Value is less than \$15,000 do not list the subcontractor above.]
- b) \$350,000 regardless of the percentage of the total Contract Price

Failure to submit this form by the disclosure deadline will result in a non-responsive bid. A non-responsive bid will not be considered for award.

Form submitted by (Bidder Name): _____

Contact Name: _____ **Phone:** _____

Signature: _____

END OF DOCUMENT 00 45 22

DOCUMENT 00 52 13
FORM OF AGREEMENT

PART 1 GENERAL

STANDARD FORM

The form of Agreement will be executed on AIA Form A 101, Standard Form of Agreement Between Owner and Contractor, 2007 edition, which is included by reference. The document, as edited by Owner, is available for review at <http://www.4j.lane.edu/bids/>.

END OF DOCUMENT 00 52 13

**DOCUMENT 00 72 13
GENERAL CONDITIONS**

PART 1 GENERAL

STANDARD FORM

General Conditions of the Contract for Construction AIA Document A-201, 2007 edition, immediately following, are part of these specifications.

The Contractor and all Subcontractors shall read and be governed by them.

CONFLICTS

In the case of conflicts between the General Conditions and these Specifications, the Specifications govern.

END OF DOCUMENT 00 72 13

DOCUMENT 00 73 00
SUPPLEMENTARY CONDITIONS
FOR GENERAL CONDITIONS FOR THE CONTRACT FOR CONSTRUCTION

PART 1 GENERAL

The following supplements modify, change, delete from or add to AIA Document A201, General Conditions of the Contract for Construction 2007 Edition. Where any part of the AIA General Conditions is amended, voided, or superseded by the Supplementary Conditions, the unaltered provisions shall remain in effect.

1.1 ARTICLE 1 GENERAL PROVISIONS

A. BASIC DEFINITIONS

1. Add the following Subparagraphs:

1.1.9 ARCHITECT/ENGINEER

Where the term ARCHITECT is used in the Bidding documents, Contract documents, Addenda, Change Orders or other documents related to this contract it shall be defined as either "Architect" or "Engineer" depending upon which design professional has prepared the document in question. When the project has been designed and initiated under the direction of a licensed engineer, the term ENGINEER shall be substituted for the term "Architect" throughout all documents.

1.1.10 MISCELLANEOUS DEFINITIONS

- .1 "Provide:" Furnish and install, or furnish labor and materials required for installation, ready for use and in accordance with the Contract Documents.
- .2 "As shown:" As indicated, as detailed, as noted, or words of similar import refer to Contract Documents.
- .3 "Selected:" As selected by the Architect.
- .4 "Approved:" Approved by Architect.
- .5 "For Approval:" For the Architect's approval.

B. CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

1. Add the following to Subparagraph 1.2.1:

1.2.1.1 In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities.

1. The Agreement.
2. Addenda, with those of later date having precedence over those of earlier date.
3. The Supplementary Conditions.
4. The General Conditions of the Contract for Construction.
5. Division 1 of the Specifications.
6. Drawings and Divisions 2- 49 of the Specifications.

In the case of conflicts or discrepancies between Drawings and Divisions 2- 49 of the Specifications or within either Document not clarified by Addendum, the Architect will determine which takes precedence in accordance with Subparagraph 4.2.11.

2. Add the following Subparagraphs:

1.2.4 If work is required in such a manner to make it impossible to produce first class work or should discrepancies appear among Contract Documents, request interpretation before proceeding with work. If Contractor fails to make such request, the Contractor will thereafter be expected to carry out work in satisfactory manner.

SUPPLEMENTARY CONDITIONS - DOCUMENT 00 73 00

1.2.5 Reference to codes, standard specifications, or other standards means and intends latest edition of such documents and/or adopted as of bid date. Where brand name products are specified and no installation instructions given herein, install product in accordance with the manufacturer's specifications and instructions, latest edition.

1.2.6 No provision of any reference standard specification, manual or code shall change the privileges or responsibilities of Owner, Architect, or Contractor, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Architect, or any of Architect's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the work or any duty or authority to undertake responsibility contrary to the provision of the Contract Documents.

1.2.7 Sections of Division 1, General Requirements govern the execution of all sections of the specifications.

1.2 ARTICLE 2 OWNER

A. 2.1 GENERAL

1. Add the following Subparagraph:

2.1.3 The Owner is the Eugene School District 4J, 200 North Monroe Street, Eugene, Oregon 97402, (541) 790-7417.

The Owner's representative is: Dexter Rummel, Project Manager, 715 West Fourth Avenue, Eugene, OR 97402.

B. INFORMATION AND SERVICES REQUIRED OF THE OWNER

1. Delete Subparagraph 2.2.5 and substitute the following:

2.2.5 The Contractor will be furnished free of charge up to [3] copies of the Contract Documents. The Owner will furnish additional copies requested by the Contractor at the cost of reproduction, postage and handling.

1.3 ARTICLE 3 CONTRACTOR

A. 3.1 GENERAL

1. Delete the second sentence to Subparagraph 3.1.1, and add the following:

The Contractor and each subcontractor shall maintain for the duration of the Project a registration with the Oregon State Construction Contractor's Board.

2. Add the following Subparagraph 3.1.4

3.1.4 The Contractor is required to demonstrate that an employee drug testing program is in place.

3. Add the following Subparagraph 3.1.5

3.1.5 The Contractor certifies that the Contractor is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in this Contract by any Federal department or agency. If requested by the Eugene 4J School District, the Contractor shall complete a Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion form. Any such form completed by the Contractor for this Contract shall be incorporated into this Contract by reference.

B. 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

1. Delete the last sentence to Subparagraph 3.2.4, and add the following:

If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, unless the Contractor recognized such error, inconsistency, omission or difference and knowingly failed to report it to the Architect.

C. 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

1. Add the following Subparagraphs:

3.3.4 The Contractor shall review with all Subcontractors, construction means, methods and materials to be used to verify their compliance with all safety standards and laws and be responsible for compliance with same to insure safe, hazard free conditions for all persons visiting or working on the entire project.

3.3.5 The Contractor shall comply with the provisions of Oregon Revised Statutes and 4J Board Policy. Attention is directed to ORS 279A and 279C, Public Contracting Code.

D. 3.4 LABOR AND MATERIALS

1. Add the following Subparagraphs:

3.4.4 PAYMENT OF LABORERS AND MATERIALMEN, CONTRIBUTIONS TO INDUSTRIAL ACCIDENT FUND, LIENS AND WITHHOLDING TAXES: The Contractor shall: (1) Make payment promptly, as due, to all persons supplying to such contractor labor or material for the prosecution of the Work provided for in such contract. (2) Pay all contributions or amounts due the Industrial Accident Fund from such Contractor or subcontractor incurred in the performance of the contract. (3) Not permit any lien or claim to be filed or prosecuted against the state, county, school district, municipality, municipal corporation or subdivision thereof, on account of any labor or material furnished. (4) Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

3.4.5 HOURS OF LABOR: No person shall be employed for more than ten hours in any one day, or 40 hours in any one week, except in the cases of necessity, emergency, or where the public policy absolutely requires it, and in such cases the person so employed shall be paid at least time and a half of the regular pay for all time worked.

.1 For all overtime in excess of eight hours a day or 40 hours in any one week when the work week is five consecutive days, Monday through Friday; or

.2 For all overtime in excess of 10 hours a day or 40 hours in any one week when the work week is four consecutive days, Monday through Friday; and

.3 For all work performed on Saturday and on any legal holiday specified in ORS 279C.540.

.4 Worker claims for overtime, in order to be considered, must be filed with the Contractor within 90 days from the completion of the contract, in accordance with ORS 279C.545.

The Contractor shall give notice to employees who work on a public contract in writing, either at the time of hire or before commencement of work on the contract, or by posting a notice in a location frequented by employees, of the number of hours per day and days per week the employees may be required to work.

3.4.6 PAYMENT FOR MEDICAL CARE AND PROVIDING WORKERS' COMPENSATION: The Contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, of all sums which the Contractor agrees to pay for such services and all moneys and sums which the Contractor collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service. All employers working under this contract are subject employers and must comply with ORS 656.017.

3.4.7 PREVAILING WAGE RATES: When the total price of the Project is \$50,000 or more, each worker in each trade or occupation employed in the performance of this Contract either by the contractor, subcontractor or other person doing or contracting to do contracting for the whole or any part of the Work on the Contract shall be paid not less than the applicable state prevailing rate of wage. This provision applies to all contracts, regardless of the price of the individual contract, as long as the combined price of all contracts awarded on the Project is \$50,000 or more.

a. The existing BOLI prevailing rates of wage in effect at the time the specifications are first advertised for bid solicitations is the applicable rate. Refer to Section 00 73 43.

- b. The Owner will pay the public works fee to Oregon Bureau of Labor and Industries.
- c. Certification of rate or wage by Contractor or Subcontractor (ORS 279C.845):
 - .1 The contractor or the contractor's surety and every subcontractor or the subcontractor's surety shall file certified statements with the public agency in writing, on a form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker whom the contractor or the subcontractor has employed upon the public works, and further certifying that no worker employed upon the public works has been paid less than the applicable state prevailing rate of wage or less than the minimum hourly rate of wage specified in the contract. The certificate and statement shall be verified by the oath of the contractor or the contractor's surety or subcontractor or the subcontractor's surety that the contractor or subcontractor has read the statement and certificate and knows the contents thereof and that the same is true to the contractor or subcontractor's knowledge. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid.
 - .2 If the Contractor does not file certified payroll as required (at least once per month) the Owner will withhold 25% of the amounts due the Contractor, in addition to any other required retainage.
 - .3 If a first-tier Subcontractor does not file certified payroll reports as required, the prime Contractor shall withhold 25% of amounts due the first-tier Subcontractor.
 - .4 Each certified statement required by subsection (1) of this section shall be delivered or mailed by the contractor or subcontractor to the public contracting agency. Certified statements shall be submitted to the public contracting agency once a month by the fifth business day of the following month, for each week workers are employed. Information submitted on certified statements may be used only to ensure compliance with the provisions of ORS 279C.800 to 279C.870.
 - .5 Each contractor or subcontractor shall preserve the certified statements for a period of three years from the date of completion of the contract.
 - .6 Certified statements received by a public agency are public records subject to the provisions of ORS 192.410 to 192.505. As such, they must be made available upon request.

3.4.8 PAYMENT OF CLAIMS BY PUBLIC OFFICERS: If the Contractor fails, neglects or refuses to make prompt payment of any claims for labor or services furnished to the Contractor or a subcontractor by any person in connection with this Contract as such claim becomes due, the Owner may pay such claim and charge the amount of the payment against funds due or to become due the Contractor by reason of this Contract.

3.4.9 PAYMENT FOR MEDICAL CARE AND PROVIDING WORKERS' COMPENSATION: The Contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, of all sums which the Contractor agrees to pay for such services and all moneys and sums which the Contractor collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service.

3.4.10 Any person owed for labor or material by a subcontractor or Contractor may file a complaint with the Construction Contractors Board in accordance with ORS 279C.515(3).

E. 3.7 PERMITS, FEES AND NOTICES

- 1. Delete Subparagraph 3.7.1, and substitute the following:

3.7.1 The OWNER will pay the plan check fee, building permit fee, and systems development charges directly to the authority having jurisdiction.

The CONTRACTOR shall pay for all other permits, fees, licenses and inspections necessary for the proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received or negotiations concluded. The

Contractor shall pick up permits and call for inspections through final inspection, as required by the City Building Department.

F. 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

1. Add the following to Subparagraph 3.12.5:

Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect without action.

2. Add the following to Subparagraph 3.12.9:

Shop drawings that are submitted to the Architect for review do not constitute "in writing" unless it is brought to the attention of the Architect, in written form, that specific changes are being suggested. In any event, changes to the contract documents by means of shop drawings become the responsibility of the person initiating such changes.

G. 3.18 INDEMNIFICATION

1. Delete Subparagraph 3.18.1, and substitute the following:

13.18.1 To the fullest extent of the law, the Contractor will defend, indemnify, hold harmless and reimburse the Eugene School District 4J (including its officers, board members, agents, and employees) from all claims, demands, suits, actions, penalties, and damage expenses, for liability of any kind including attorney's fees. To the extent that death or bodily injury to persons or damage to property arises out of the fault of the Contractor, the Contractor's indemnity obligation exists only to the extent that the death or bodily injury to persons or damage to property arises out of the fault of the Contractor, or the fault of the Contractor's agents, representatives or subcontractors, contributed to or caused such damage, whether or not such incidents are contributed to or caused in any part by Eugene School District 4J.

1.4 ARTICLE 4 ARCHITECT

A. 4.1 GENERAL

1. Modify Paragraph 4.1.1

- a. In the first sentence delete "shall retain" and insert "may have retained" in it's place.
- b. Add sentence: "The term "Architect" means the Architect or the Architect's authorized representative."

2. Add the following to Subparagraph 4.1.2:

Written consent of the Contractor shall only apply to those items which directly or indirectly affect the work of the Contractor.

3. Add the following Subparagraph:

In the first sentence delete "shall" and insert "may" in its place.

4. Add the following Subparagraph:

4.1.4 The Architect is defined as:

RODD HANSEN, Architect, LLC

1551 Oak Street, Suite A

Eugene, OR 97401

B. 4.2 ADMINISTRATION OF THE CONTRACT

1. Add the following sentence to 4.2.1:

The architect may be retained to administer the Contract through the specified period for correction of the Work described in Section 12.2

2. Add the following to Subparagraph 4.2.4:

SUPPLEMENTARY CONDITIONS - DOCUMENT 00 73 00

4.2.4.1 The Owner may communicate directly with the Contractor when necessary or appropriate. The Owner may give direction to the Contractor in matters related to access to the site, coordination with Owner's occupancy and use by the public, use of parking and staging areas, use of potentially hazardous products, drug and alcohol policy, no smoking policy, appropriate dress and behavior, safety requirements and safe work practices, where appropriate. The Owner will advise the Architect regarding any communication with or direction given to the Contractor.

4.2.4.2 Representatives of the Owner, Contractor and Architect shall meet periodically at mutually agreed-upon intervals for the purpose of establishing procedures to facilitate cooperation, communication and timely responses among the participants. By participating in this arrangement, the parties do not intend to create additional contractual obligations or modify the legal relationships which may otherwise exist. Nothing in this agreement shall give the Architect the authority to make decisions or give direction without the Owner's concurrence.

3. Add the following to Subparagraph 4.2.9:

4.2.9.1 The Architect will make one inspection for the determination of Substantial Completion and one for determination of Final Acceptance. Such inspections will be made only after receipt of written notification of readiness for such inspections from Contractor.

4.2.9.2 Should additional inspections beyond those listed in 4.2.9.1 be required due to Contractor's failure to satisfactorily complete all work, the Contractor shall become responsible for all costs incurred by the Owner in conjunction with required re-inspections. A deductive Change Order shall be prepared using the following hourly rates as the basis for calculating the amounts to be deducted:

Architect/Engineer:	\$125 per hour
District 4J Personnel:	\$ 75 per hour

4.2.9.3 The amount to be deducted from the Contract shall be calculated by multiplying the hours expended in additional inspections and documentation by the hourly rates listed in 4.2.9.2.

4. Add the following sentence to Subparagraph 4.2.11:

The architect's response will be within 10 days of receipt of written requests from the Owner or Contractor.

5. Delete Subparagraph 4.2.13, and substitute the following:

4.2.13 Decisions on matters related to aesthetic effect will be made collaboratively between the Owner and the Architect. The final decision shall be the Owner's, if consistent with the intent expressed in the Contract Documents.

6. Add the following sentence to Subparagraph 4.2.14

The architect's response will be within 10 days of receipt of written requests from the Owner or Contractor.

1.5 ARTICLE 5 SUBCONTRACTORS

A. 5.3 SUBCONTRACTUAL RELATIONS

1. Add the following Subparagraphs:

5.3.1 The Contractor shall include in each subcontract for property or services entered into by the Contractor and a subcontractor, including a material supplier, for the purpose of performing a construction contract:

- 1 A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract within 10 days out of such amounts as are paid to the Contractor by the owner under such contract; and
- 2 An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty on amounts due in the case of each payment not made in accordance with the payment clause included in the subcontract pursuant to paragraph .1 of this section for the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; computed at the rate specified in ORS 279C.580.

SUPPLEMENTARY CONDITIONS - DOCUMENT 00 73 00

5.3.2 The Contractor shall include in each of its subcontracts, for the purpose of performance of such contract condition, a provision requiring the subcontractor to include a payment clause and an interest penalty clause conforming to the requirements of Subparagraph 5.3.1 in each of its subcontracts and to require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

1.6 ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

No modifications.

1.7 ARTICLE 7 CHANGES IN THE WORK

A. 7.1 GENERAL

1. Paragraph 7.1.2, delete the following: “an order for minor changes in the Work can be issued by the Architect alone”.

2. Add the following Subparagraph 7.1.4 to Paragraph 7.1:

7.1.4 The combined overhead and profit included in the total cost or credit to the Owner of a change in the Work shall not exceed that stated in 7.1.4.4 below. In no case shall the Contractor’s or Subcontractors individual overhead and profit request exceed the following schedule:

.1 For the Contractor, for Work performed by the Contractor’s own forces, 15 percent of the cost.

.2 For the Contractor, for Work performed by the Contractor’s Subcontractors, 10 percent of the amount due the Subcontractors.

.3 For each Subcontractor involved, for Work performed by that Subcontractor’s own forces, 10 percent of the cost.

.4 The **Base Cost** to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 7.3.7., articles .1, .2, .3, .4, and .5. To this **Base Cost** is added the applicable overhead and profit. In no case shall the combined overhead and profit (including all Contractor and Subcontractor(s) overhead and profit) exceed 25 percent of this **Base Cost**.

.5 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including those applicable costs from paragraph 7.3.7, .1 - .5, and Subcontractor and Contractor overhead and profit as applicable.

.6 Cost of preparing change order shall not be included in cost of Change Order.

3. Add the following Subparagraph 7.1.5 to Paragraph 7.1:

7.1.5 A Change Order providing a net CREDIT to the Owner shall include a credit for overhead and profit based on the following schedule:

.1 For the Contractor, 5 percent of the Cost to be credited.

.2 For each Subcontractor, 5 percent of the Cost to be credited.

.3 For each Sub-subcontractor, 5 percent of the Cost to be credited.

.4 All other provisions of Subparagraph 7.1.4 shall apply to Credit Change Orders.

B. 7.3 CONSTRUCTION CHANGE DIRECTIVES

1. Add the following to Subparagraph 7.3.1:

For the purposes of this Agreement, The Owner’s “CHANGE REQUEST/PROCEED ORDER” may be substituted for and used interchangeably with “CONSTRUCTION CHANGE DIRECTIVE”.

2. Modify Subparagraph 7.3.7 as follows:

In the first sentence, delete the words "a reasonable amount." and substitute "an amount for overhead and profit in accordance with Paragraph 7.1.4 or 7.1.5."

3. Delete Subparagraph 7.3.7.1 and substitute the following:

7.3.7.1 The maximum allowable hourly wage rate for Changes to the Work shall be the appropriate Base Wage Rate plus Fringe Rate as listed for each occupation in the Prevailing Wage Rate for Public Works Contracts in Oregon manual issued by the Oregon Bureau of Industries; multiplied by 1.25. An amount for Overhead and Profit may be added in accordance with Paragraph 7.1.4 or 7.1.5. The contractor's "shop rates" shall not exceed the cost of their "field rates," as calculated in this subsection.

4. Delete 7.3.7.3, and substitute the following:

7.3.7.3 Rental costs of machinery and equipment, exclusive of hand tools and motor vehicles, when rented from the Contractor or others;

5. Change the first sentence of Subparagraph 7.3.8 to read as follows:

The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost, including overhead and profit according to the schedule in Subparagraph 7.1.5 above.

6. Change the first sentence of Subparagraph 7.3.9 to read as follows:

Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in the Application for Payment accompanied by an executed Change Order indicating the parties' agreement with part or all of such costs.

1.8 ARTICLE 8 TIME

A. 8.2 PROGRESS AND COMPLETION

1. Add the following Subparagraph 8.2.4

8.2.4 The Contractor agrees that said work shall be executed regularly, diligently, at such a rate of progress as will insure Substantial Completion thereof within the time specified. It is expressly understood and agreed by and between the Contractor and the Owner that the time for the completion of the work described herein is reasonable taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

1.9 ARTICLE 9 PAYMENT AND COMPLETION

A. 9.2 SCHEDULE OF VALUES

1. Revise the first sentence of Subparagraph 9.2 to read as follows:

".... the Contractor shall submit to the Architect and the Owner,....."

2. Add the following sentence to Paragraph 9.2:

Submit on AIA Document A703, latest edition.

B. 9.3 APPLICATIONS FOR PAYMENT

1. Add the following sentence to Subparagraph 9.3.1:

The form of Application for Payment shall be a notarized AIA Document G702, Application and Certification for Payment, supported by AIA Document G703, Continuation Sheet.

2. Delete Clause 9.3.1.1, and substitute the following:

9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, accompanied by an executed Change Order.

C. 9.5 DECISIONS TO WITHHOLD CERTIFICATION

1. Delete Subparagraph 9.5.3.

D. 9.6 PROGRESS PAYMENTS

1. Add the following Clause to Subparagraph 9.6.1:

9.6.1.1 After the Architect has issued a certificate for payment and it has been approved by the Owner, the Owner will pay the Contractor 95 percent (95%) of the total value of material and labor incorporated into the project as indicated on the Application for Payment less the aggregate of previous payments. Progress schedule update shall accompany each payment request.

9.6.1.2 Payment will be made within fifteen (15) days of approval of the Application for Payment by School District 4J ("Progress Payment Due Date").

9.6.1.3 The first Application for Payment and each subsequent Application for Payment will not be considered complete unless it is accompanied by the certified payroll for the contractor and all subcontractors requesting payment.

2. Add the following Subparagraph to Paragraph 9.6:

9.6.8 In lieu of cash retainage to be held by the Owner, the Contractor may select one of the following options:

- 1 The Contractor may deposit bonds or securities with the Owner or in any bank or trust company to be held for the benefit of the Owner. In such event, the Owner shall reduce the retainage in an equal amount to the value of the bonds and securities.
- 2 Upon written request of the Contractor, the Owner will deposit any amounts withheld as retainage in an interest-bearing account in a bank, savings bank, trust company or savings association for the benefit of the Owner. Interest earned shall accrue to the Contractor.
- 3 If the Owner incurs additional costs as a result of the exercise of any of the options for retainage described herein, the Owner may recover such costs from the Contractor by reduction of final payment.

E. 9.8 SUBSTANTIAL COMPLETION

1. Delete Subparagraph 9.8.1 and substitute the following:

9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can fully occupy and fully utilize the Work for its intended use with only minor corrective work remaining which can be accomplished without disruption of the occupants.

2. Delete the last two sentences to Subparagraph 9.8.5 and add the following:

9.8.5 Upon Substantial Completion of the Work, the Contractor may submit an application for payment in accordance with Subparagraph 9.3.1 in an amount sufficient to increase the total payments to ninety-five percent (95%) of the Contract Sum, less such amounts as the Architect determines for incomplete Work or unsettled claims.

F. 9.10 FINAL COMPLETION AND FINAL PAYMENT

1. Modify Item (2) in Subparagraph 9.10.2 to read:

(2) A certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a

2. Add the following Subparagraph to Paragraph 9.10:

9.10.6 The Contractor shall not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished in connection with the Work.

G. Add the following Paragraphs to Article 9:

1. 9.11 LIQUIDATED DAMAGES

9.11.1 The Owner will suffer financial loss if the Work is not Substantially Complete, as defined in Article 9.8.1 above, on the dates specified in Section 01 11 00. The Contractor and the Contractor's

SUPPLEMENTARY CONDITIONS - DOCUMENT 00 73 00

surety shall be liable for and shall pay the Owner the sum hereinafter stipulated as fixed, agreed, and liquidated damages for each calendar day of delay until the date established in the Certificate of Substantial Completion.

The agreed amount of liquidated damages is **\$1,000** per each calendar day. The amount of liquidated damages may be reduced in cases of partial occupancy, at the sole discretion of the Owner.

2. 9.12 AGENCY PAYMENT FOR UNPAID LABOR OR SUPPLIES

9.12.1 Contract incomplete. If the Contract is still in force, the Agency may, in accordance with ORS 279C.515, pay a valid claim to the Entity furnishing the labor or services, and charge the amount against payments due or to become due to the Contractor under the Contract. If an Agency chooses to make such a payment as provided in 279C.515, the Contractor and the Contractor's surety shall not be relieved from liability for unpaid claims.

9.12.2. Contract completed. If the Contract has been completed and all funds disbursed to the prime Contractor, all claims shall be referred to the Contractor's surety for resolution. The Agency shall not make payments to subcontractors or suppliers for Work already paid for by the Agency.

1.10 ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

A. 10.1 SAFETY PRECAUTIONS AND PROGRAMS

1. Add the following sentence to Article 10.1

Where asbestos abatement is part of the Work, the Contractor or appropriate subcontractor shall be licensed by the Department of Environmental Quality to perform "asbestos abatement work", OAR 340-248-0120, Adopted January 25, 1990, and meet requirements of AHERA, as specified in Federal Register 40CFR, Part 763.

B. 10.3 HAZARDOUS MATERIALS

1. Delete Subparagraph 10.3.3.

1.11 ARTICLE 11 INSURANCE AND BONDS

A. 11.1 CONTRACTOR'S LIABILITY INSURANCE

1. Modify the second sentence of Subparagraph 11.1.2 as follows:

a. Delete the following: "...and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of coverage as specified in the Contract Documents."

2. Add the following Clause to Subparagraph 11.1.2:

.1. The Contractor shall provide and maintain in force for the duration of this agreement, the following:

.1 General Insurance:

The Contractor shall maintain in force for the duration of this agreement a Umbrella Insurance Policy with the limits not less than \$5,000,000, a Commercial General Liability, Automobile Liability (owned, non-owned and hired) Insurance policy(s) written on an occurrence basis with limits not less than \$1,000,000 per occurrence and \$2,000,000 in the aggregated naming the District, its employees, officials and agents as an additional insured as respects to work or services performed under this agreement. This insurance will be primary to any insurance the District may carry on its own.

.2 Professional Liability / Errors and Omissions Coverage:

To the extent that the Contractor accepts deferred design or design/build responsibilities, the Contractor shall purchase and maintain Professional Liability / Errors and Omissions insurance, or cause that those Subcontractors providing design services do, in the amount of \$5,000,000 each claim/per project aggregate.

.3 Workers' Compensation:

SUPPLEMENTARY CONDITIONS - DOCUMENT 00 73 00

Contractor shall provide and maintain workers' compensation coverage for its employees, officers, agents, or partners, as required by applicable workers' compensation laws.

.4 Evidence of Coverage:

Evidence of the above coverages issued by a company satisfactory to the District shall be provided to the District by way of a certificate of insurance before any work or services commence. A 30-day notice of cancellation or material change in coverage clause shall be included. It is the Contractor's obligation to provide the 30 days notice if not done so by the Contractor's insurance company(s). Failure to maintain the proper insurance shall be grounds for immediate termination of this Agreement.

.5 Subcontractors:

The Contractor shall require all subcontractors to provide and maintain general liability, auto liability, professional liability (as applicable) and Workers' Compensation insurance with coverage's equivalent to those required of the General Contractor in this Agreement. The Contractor shall require certificates of insurance from all subcontractors as evidence of coverage.

.6 Exceptions or Waivers:

Any exception or waiver of these requirements shall be subject to review and written approval from the Eugene School District Risk Manager.

3. Delete the second sentence of Subparagraph 11.1.3

4. Add the following sentences to Subparagraph 11.1.3:

The Contractor shall provide written notification to the Owner of the cancellation or expiration of any insurance required by Section 11.1. The Contractor shall provide such written notice within five (5) business days of the date the Contractor is first aware of the cancellation or expiration, or is first aware that the cancellation or expiration is threatened or otherwise may occur, whichever comes first.

B. 11.3 PROPERTY INSURANCE

1. Modify the first sentence of Subparagraph 11.3.1 as follows:

- a. Delete "Unless otherwise provided, the Owner" and substitute "The Contractor".
- b. Modify the last sentence by adding "Architect," after the word "Owner".

2. Add the following to Clause 11.3.1.1:

The form of policy for this coverage shall be Completed Value. If the Owner is damaged by the failure of the Contractor to maintain such insurance, then the Contractor shall bear all reasonable costs properly attributed thereto.

3. Delete Clause 11.3.1.2.

4. Modify Clause 11.3.1.3 by substituting "Contractor" for "Owner".

5. Delete Clause 11.3.1.4.

6. Modify the first sentence of Subparagraph 11.3.2 to read: "The Owner, at the Owner's option, may purchase..."

7. Delete Subparagraph 11.3.4.

8. Delete Subparagraph 11.3.6, and substitute the following:

11.3.6 Evidence of the above coverages issued by a company satisfactory to the District shall be provided to the District by way of a certificate of insurance before any work or services commence. The Contractor shall provide written notification to the Owner of the cancellation or expiration of any insurance required by Section 11.3. The Contractor shall provide such written notice within five (5) business days of the date the Contractor is first aware of the cancellation or expiration, or is first aware that the cancellation or expiration is threatened or otherwise may occur, whichever comes first. Failure to maintain the proper insurance shall be grounds for immediate termination of this Agreement.

9. Modify 11.3.7 by substituting “Contractor” for “Owner” at the end of the first sentence.
10. Modify the first sentence of Subparagraph 11.3.8 to read as follows:

11.3.8 A loss insured under the Contractor’s property insurance shall be adjusted by the Contractor as fiduciary and made payable to the Contractor and Owner, as their interests may appear, subject to requirements of any applicable mortgagee clause.
11. Delete Subparagraph 11.3.9.
12. Modify the first sentence of Subparagraph 11.3.10 by substituting “Contractor” for “Owner” the first two times it occurs. Modify the last sentence by substituting “Contractor” for “Owner” the second time it occurs.
13. Add the following Subparagraph:

11.3.11 EQUIPMENT AND MATERIAL:
The Contractor shall be responsible for any loss, damage, or destruction of Contractor’s own property, equipment, and materials used in conjunction with the Work.

C. 11.4 PERFORMANCE BOND AND PAYMENT BOND

1. Delete 11.4.1 and 11.4.2 and substitute the following:

11.4.1 Unless otherwise stated in the solicitation document, prior to execution of the Agreement, the Bidder shall furnish separate bonds that in all respects conform to the requirements of ORS 279C.380 covering the faithful performance of the Contract, and the payment of all obligations arising thereunder, each in an amount equal to one hundred percent (100%) of the Contract sum. The duration of the performance bond shall match the length of the project warranty.

11.4.2 The surety issuing such bonds shall be duly authorized and licensed to issue bonds in the State of Oregon. The bonds shall be executed by an Attorney-in-fact, principal or other authorized representative for the surety company, showing the Oregon agent for service, and bears the seal of the surety company. Where the bond is executed by a person outside the state of Oregon, his authority to execute bond shall be shown.

11.4.3 Bonds are to be obtained through a company that is on the US Government Treasury list for approved sureties and/or approved by the Owner’s Risk Manager.

11.4.4 Bonds shall be submitted on AIA Document A312, latest edition.

11.4.5 The cost of furnishing such bonds shall be included in the bid.

11.4.6 The Contractor shall deliver the required bonds to the Owner with the signed Agreement to:
Amanda Clinton
Facilities Management Office
Eugene Public School District 4J
715 West Fourth
Eugene, Oregon 97402

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

D. Add the following Paragraphs to Article 11:

1. 11.5 PUBLIC WORKS BOND:

11.5.1 Pursuant to ORS 279C.836, for any contract awarded where the contract price is \$100,000 or greater, the Contractor and every subcontractor shall have a Public Works bond, in the amount of \$30,000 filed with the Construction Contractors Board (CCB) before starting work on the project unless exempt. This bond is in addition to performance bond and payment bond requirements. **A copy of the Contractor’s State of Oregon Statutory Public Works Bond shall be provided with the executed contract documents.**

11.5.2 Contractor shall include in every subcontract a provision requiring their Subcontractors to have

SUPPLEMENTARY CONDITIONS - DOCUMENT 00 73 00

a public works bond filed with the CCB before starting work on the project, unless exempt. Contractors shall verify that all of their subcontractors have filed a public works bond with the CCB.

1.12 ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

A. 12.2 AFTER SUBSTANTIAL COMPLETION

1. Add the following sentence to Clause 12.2.2.1:

The correction period relating to faulty products and workmanship will begin on the date appearing on the Certificate of Substantial Completion, or if a Certificate of Substantial Completion is not issued, on the date appearing on the Final Certificate of Payment to the Contractor, whichever is earlier. The Owner's use of the project will not alter the warranty period herein defined.

2. Add the following sentence to Clause 12.2.2.2:

The correction periods specified are an extension of the one-year correction period called for in the General Conditions and are in addition to any guaranty bond called for elsewhere.

1.13 ARTICLE 13 MISCELLANEOUS PROVISIONS

A. 13.1 GOVERNING LAW

1. Change Paragraph 13.1 to read as follows:

13.1 The Contract shall be governed by the law of the place where the Project is located.

B. Add the following Subparagraph 13.1.1:

13.1.1 Contractor shall be in compliance with the Oregon Department of Revenue tax certification rules including OAR 150-305.385 (6)-A, (6)-B, (6)-C and (7).

C. Revise Subparagraph 13.2.1 as follows:

Delete last two sentences, and replace with:

Contractor shall not assign, sell, dispose of, or transfer rights, nor delegate duties under the contract, either in whole or in part, without the Contracting Agency's prior written consent. Unless otherwise agreed by the Contracting Agency in writing, such consent shall not relieve the Contractor of any obligations under the contract. Any assignee or transferee shall be considered the agent of the Contractor and be bound to abide by all provisions of the contract. If the Contracting Agency consents in writing to an assignment, sale, disposal or transfer of the Contractor's rights or delegation of Contractor's duties, the Contractor and its surety, if any, shall remain liable to the Contracting Agency for complete performance of the contract as if no such assignment, sale, disposal, transfer or delegation had occurred unless the Contracting Agency otherwise agrees in writing, in accordance with ORS 279A.065.

D. Delete Subparagraph 13.2.2

E. Add the following Paragraphs to Article 13:

1. 13.8 ENVIRONMENTAL AND NATURAL RESOURCES LAWS AND RULES

13.8.1 The Contractor and subcontractors shall comply with federal, state, and local ordinances and regulations dealing with prevention of pollution and preservation of natural resources that affect Work of this project.

13.8.2 Pursuant to ORS 279C.525, If the Contractor is delayed or must undertake additional work by reason of existing regulation or ordinances of agencies not cited in the Contract Documents or due to the enactment of new or the amendment of existing statutes, ordinances, or regulations relating to the prevention of environmental pollution and the preservation of natural resources occurring after the Bid Date, the Owner will grant a time extension and issue a change order setting forth the additional work that must be undertaken. The change order shall not invalidate the contract and there shall be, in addition to a reasonable extension of the Contract time, a reasonable adjustment in the Contract price to compensate the successful bidder for all costs and expenses incurred, including overhead and profits, as

a result of such delay or additional work.

2. 13.9 FOREIGN CONTRACTORS

In the event this Contract is awarded to a Contractor not domiciled in or registered to do business in the State of Oregon and the contract price exceeds \$10,000, the Contractor shall promptly report to the Department of Revenue the total price, terms of payment, length of contract, and such other information as the Department of Revenue may require before final payment can be received on the public contract. The Owner will satisfy itself that the requirement of this subsection has been complied with before it issues a Final Payment.

3. 13.10 EQUAL OPPORTUNITY

13.10.1 The Contractor shall maintain policies of employment as follows:

13.10.1.1 The Contractor and the Contractor's subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, national origin, physical or mental handicap, sexual orientation or age, unless based upon bona fide occupational qualifications; and that they are otherwise in compliance with all federal, state and local laws prohibiting discrimination. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. It is further understood that any vendor who is in violation of this clause shall be barred forthwith from receiving awards of any purchase order from the School District, unless a satisfactory showing is made that discriminatory practices have terminated and that a recurrence of such acts is unlikely. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of nondiscrimination.

13.10.1.2 The Contractor and the Contractor's subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex or national origin.

4. 13.11 DRUG-TESTING PROGRAM

13.11.1 The contractor agrees with the provisions of Oregon Revised Statutes 279C.505, which requires that the contractor shall demonstrate it has established a drug-testing program for employees and will require each subcontractor providing labor for the Project to do the same.

1.14 ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

No modifications.

1.15 ARTICLE 15 CLAIMS AND DISPUTES

A. 15 CLAIMS AND DISPUTES

1. Add the following to Clause 15.1.5.2

Abnormal weather conditions for the purposes of this agreement are defined as conditions more extreme than any conditions experienced within the general vicinity of the site for each project for a comparable period at any time within the past ten years.

2. Delete Subparagraph 15.1.6.

B. 15.2 INITIAL DECISION

1. Modify Subparagraph 15.2.1 as follows:

In the third sentence, change "30 days" to read "10 days" and add the following: The Initial Decision Maker shall review all submitted claims and render decisions as soon as possible.

2. Modify Clause 15.2.6.1 as follows:

SUPPLEMENTARY CONDITIONS - DOCUMENT 00 73 00

In the first sentence, change the “30 days and “60 days” to read “10 days” and “30 days” respectively.

C. 15.3 MEDIATION

1. Delete Paragraph 15.3 MEDIATION, and substitute the following:

15.3 MEDIATION AND ARBITRATION

15.3.1 Parties shall attempt to resolve all disputes at the lowest possible level. Both parties to this Agreement agree to provide other resources and personnel to negotiate and find resolution to disputes that cannot be resolved at the Project Manager level. As a next step, claims, disputes or other matters in question between the parties to this Agreement arising out of or relating to this Agreement or breach thereof shall be determined by mediation, arbitration or litigation. Disputes shall be initially submitted to mediation by a mediator chosen by the parties. The cost of mediation shall be borne equally by the parties. If the parties are unable to agree upon a mediator within five days or if mediation fails to resolve the dispute, either party may request that the dispute be submitted to arbitration before a single arbitrator agreed to by the parties in an additional five days. If both parties agree to arbitration but are unable to agree upon an arbitrator, each party shall select an arbitrator, the arbitrators so chosen shall select a third, and the decision of a majority of the arbitrators shall be final, binding the parties, and any judgment may be entered thereon. Unless the parties mutually agree otherwise, any arbitration proceeding shall be conducted in accordance with the currently in effect Construction Industry Arbitration Rules of the American Arbitration Association.

Notwithstanding the above, the Owner may, at the Owner’s sole discretion, elect to resolve disputes in excess of \$50,000 by litigation, if mediation is not successful.

15.3.2 In the event of arbitration or litigation arising out of the execution of this Agreement, the prevailing party shall be entitled to recover from the adverse party, reasonable attorney fees and costs for the arbitration proceedings, trial court or any appellate proceeding, in the amount determined by the arbitrator or the court, as appropriate.

For the purposes of the above provisions referring to attorney fees and related costs, the prevailing party in an arbitration proceeding or trial shall be a claimant who receives an award or damages in excess of the adverse party’s pretrial or prehearing offer made at least 10 days before trial or hearing. If the claimant receives an award of damages no greater than the adverse party’s pretrial or prehearing offer, the adverse party shall be deemed to be the prevailing party. In the event both sides are awarded damages, the prevailing party shall be the party who recovers the net award, provided the recovery exceeds the adverse party’s pretrial or prehearing offer. If the claimant net recovery is no greater than the adverse party’s pretrial or prehearing offer, the adverse party shall be deemed the prevailing party.

D. 15.4 ARBITRATION

1. Delete Paragraph 15.4 ARBITRATION.

END OF DOCUMENT 00 73 00

DOCUMENT 00 73 43

PREVAILING WAGE RATES

PART 1 GENERAL

The Prevailing Wage Rates dated January 1, 2018, including any subsequent corrections or amendments issued by the Oregon Bureau of Labor and Industries, are included as a portion of the Contract Documents by reference. Copies are available for review at the office of Facilities Management, School District 4J, and can be viewed on line at www.boli.state.or.us. Click on Prevailing Wages, then PWR Rate Publications, and then Prevailing Wage Rates for Public Works Contracts in Oregon (subject only to state law).

END OF DOCUMENT 00 73 43

**SECTION 01 11 00
SUMMARY OF WORK**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: The project consists of removing some existing lockers & concrete bases, purchasing & installing some new lockers, cutting a new door into an existing wall, removing a wall & installing beams & columns, building a small vestibule with gyp & stud walls, adding as well as renovating an existing restroom. New accessible fixtures will be installed, as well as accessible grab bars & dispensers, signage, etc. Minor mechanical, electrical, fire alarm & roofing work will also be required.

- 1. Project Location: South Eugene HS, 400 East 19th Ave., Eugene, OR 97401.
- 2. Owner: Eugene School District 4J, 715 West Fourth Avenue, Eugene, OR 97402.

- B. Architect Identification: The Contract Documents, dated **March 22, 2018**, were prepared for Project by Rodd Hansen Architect.

C.

- D. Project Manager: Dexter Rummel has been appointed by Owner to serve as Project Manager.

1.3 CONTRACT

- A. Project will be constructed under a general construction contract.

- 1. **SEHS Women's Locker rm Remodel 2018.**

1.4 WORK SEQUENCE

- A. Do not commence Work until after execution of Agreement and receipt of Notice-to-Proceed from Owner. **Available 6/20/18.**
- B. Perform work in order to achieve Substantial Completion by **8/4/2018.**
- C. Achieve Final Completion within seven (7) days following the date of Substantial Completion.

1.5 USE OF PREMISES

- A. Work Area Access: Buildings [will] [will not] be occupied during work. Access to the work area will be available on a week-day basis from approximately 7:00 am to 6:00 pm. Coordinate all other work hour schedules with Owner so as not to interfere with Owner's use of the building.
- B. Limit use of the premises to construction activities in areas indicated; allow for Owner occupancy and use by the public, subject to approval by a District Safety Specialist.

SUMMARY OF WORK – SECTION 01 11 00

- C. Site Access: Maintain drives and building entrances and exits clear and protected at all times to Owner's, employees, and public access and for use by emergency personnel. Do not use these areas for parking or storage. Schedule deliveries to minimize space and time requirements for storage of materials at site.
- D. Parking: Contractor may use existing parking areas as indicated on Drawings.
- E. Contractor Staging Areas: Coordinate with Owner.
- F. Construction Operations: Limited to areas indicated on Drawings.

1.6 WORK UNDER SEPERATE CONTRACTS

- A. Separate Contract: Owner may perform certain construction operations at Project site. Those operations will be conducted simultaneously with work under this Contract. This work may include the following:
 - 1. DDC Controls by 4J direct.
- B. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.

1.7 FUTURE WORK

- 1. None Listed.

1.8 PRODUCTS ORDERED IN ADVANCE

- 1. None Listed.

1.9 OWNER-FURNISHED PRODUCTS

- A. Owner will furnish Toilet Accessories for Contractor to install. (Paper Towel Dispensers, Soap Dispensers, Toilet Paper Dispensers, Seat Protector Dispensers, Sanitary Napkin Disposals. The Work includes providing in-wall blocking to receive Owner's equipment.
 - 1. Owner will arrange for and deliver Shop Drawings, Product Data, and Samples to Contractor.
 - 2. Owner will arrange and pay for delivery of Owner-furnished items according to Contractor's Construction Schedule.
 - 3. After delivery, Owner will inspect delivered items for damage. Contractor shall be present for and assist in Owner's inspection.
 - 4. If Owner-furnished items are damaged, defective, or missing, Owner will arrange for replacement.
 - 5. Contractor shall review Shop Drawings, Product Data, and Samples and return them to Architect noting discrepancies or anticipated problems in use of product.
 - 6. Contractor is responsible for receiving, unloading, and handling Owner-furnished items at Project site.
 - 7. Contractor is responsible for protecting Owner-furnished items from damage during storage and handling, including damage from exposure to the elements.
 - 8. If Owner-furnished items are damaged as a result of Contractor's operations, Contractor shall repair or replace them.

1.10 MISCELLANEOUS PROVISIONS

- A. If there is potential for direct, unsupervised contract with students, the following Fingerprint and Background Check Requirements apply. (1.10 B)
- B. BACKGROUND CHECK – Complete the Following Steps 1 through 3
 - 1. **Payment of ODE Fee:** To complete the requirements of the Oregon Department of Education (ODE), the Contractor must go to the District Financial Services located at the Education Center building, at 200 North Monroe, Eugene, OR 97402. Upon entering the front entrance, Financial Services is the first office on the right. The ODE processing fee for the background check is \$59.00. The individual will be required to indicate name, the name of the company they represent, contact phone #, and contact email. The \$59.00 payment is required at that time.
 - 2. **Lane County School District 4J Background Check:** To complete the Lane County School District 4J background check please follow the step below.
 - a. Visit: <https://www.helpcounterweb.com/welcome/apply.php?district=eugene> Enter the requested information.
 - 3. **Independent Contractor Federal Fingerprint and Background Check Process through FieldPrint:** To complete the federal background check please follow the below steps. If you have any questions please contact the Human Resources office at 541-790-7660.
 - a. Visit: FieldprintOregon.com
 - b. Click on the “Schedule an Appointment” button.
 - c. Enter an email address under “New Users/Sign Up” and click the “Sign Up” button. Follow the instructions for creating a Password and Security Question and then click “Sign Up and Continue”.
 - d. Enter the Eugene School District Fieldprint Code – **FPEugeneSD4J**
 - e. Enter the contact and demographic information required by the FBI and schedule a fingerprint appointment at the location of your choosing.
 - f. During this process you will need the 4J “Institution ID #” which is **2082**.
 - g. At the end of the process, print the Confirmation Page. Take the Confirmation Page with you to your fingerprint appointment, along with two forms of identification.
 - h. A registration fee of \$12.50 will be due to Fieldprint during the scheduling of an appointment.
 - i. If you have any questions or problems, you may contact the Fieldprint customer service team at 877-614-4364 or customerservice@fieldprint.com .

C. DRUG AND ALCOHOL POLICY

1. The possession, use, or distribution of illicit drugs and alcohol on school premises is prohibited. Prescription medications brought to the project site shall be in the original container bearing the name of the drug, the name of the physician and the prescribed dosage.

D. USE OF TOBACCO PRODUCTS

1. Smoking and the other use of tobacco products is prohibited on all school district property pursuant to OAR 581-021-0110.

E. SAFETY REQUIREMENTS

1. Safety must not be sacrificed for the sake of productivity or expedience. Safety of students, staff, and the public is critical. Take all reasonable precautions to prevent endangerment or injury. Advise and coordinate operations with the school office.
2. All contractors who perform work on District property, and their employees, are expected to know the District's expectations for safe work and to adhere to those expectations.
3. Contractor's are to adhere to the regulations of Oregon OSHA for all projects within the School District.

F. GENERAL SAFE WORK PRACTICES

1. Students, public and school staff shall not be put at risk by the activities of contractors or their employees.
2. Safe vehicle operation rules are to be followed at all times. These include positioning vehicles to minimize the necessity of backing and providing a "spotter", someone who will make sure that people do not run into the path of a vehicle when driving on a playground or field that is occupied by students.
3. Tools shall never be left out when an unsecured work area is vacated.
4. Ladders and scaffolding will be taken down when an unsecured work area is vacated.
5. Open holes and other tripping hazards shall be fenced or barricaded when an unsecured work area is vacated.
6. Operations resulting in vapors, emissions or flying objects shall be conducted in such a way as to prevent exposure to any unprotected parties or property.
7. "Secured Work Area" is defined as an area having a perimeter cyclone fence at least 6 feet in height, with gates which close and lock so that no casual entrance is possible by unauthorized adults or children.
8. Contractor to follow all OR-OSHA rules for Confined Spaces, where applicable.

G. COMMUNICATIONS REGARDING UNSAFE PRACTICES

1. Upon perceiving a problem, the District will immediately communicate the concern to the Contractor or Contractor's representative on the work site.
2. If agreement on correction of unsafe conditions cannot be reached, the concerns of the District shall prevail and safety concerns shall be addressed in accordance with the District requirements.

H. ELECTRICAL PANELS - LOCKOUT/TAGOUT

1. Contractor shall implement a Lockout/Tag-out program for his employees who take equipment out of service or place equipment back into service. Contractor shall review the District's Energy Control Program prior to commencing work. Rules applying to this procedure are Oregon Occupational Safety and Health Code OAR 437, Division 2,

SUMMARY OF WORK – SECTION 01 11 00

Subdivision J, General Environmental Controls Lockout/Tag-out (1919.147), or latest edition.

I. ARC FLASH – ELECTRICAL SAFETY

1. Contractor shall comply with NFPA 70E (Electrical Safety in the Workplace), current edition. Contractor shall comply with Oregon OSHA 1910.137 (Personal Protective Equipment). The Contractor shall review with the School District Project Manager the 'Eugene School District Electrical Safety Program' before any work commences. The Contractor shall comply with all 'Arc Flash' and 'Electrical Safety' protocols referenced in any and all NFPA, OSHA, OROSHA, NEC, NESC, UL, IBC, IFC and ANSI documents (current editions).

J. POTENTIALLY HAZARDOUS PRODUCTS

1. The District attempts to maintain a safe and healthy environment for students and staff. The Contractor is therefore required to follow District guidelines controlling the use of potentially hazardous products and to use these products in a safe manner. Guidelines include the use of materials (adhesives, coatings, carpeting, etc.) which are known to emit little or no airborne pollutants.
2. MSDS information is required for all potentially hazardous products. The Project Manager and a District Safety Specialist will review these and determine what, if any, mitigation procedures will be required.
3. Contractor is to maintain and post copies of all MSDS information at the project site and adhere to the required controls.
4. Contractor is to ensure that work area by students and teachers is restricted. The District will provide signage appropriate for this purpose. The Contractor is to construct and maintain appropriate barriers. This shall include provision of physical separation barriers between “construction” and “occupied” spaces.
5. Contractor to adopt means of maintaining the construction space in negative air pressure in relation to occupied spaces.
6. Where there is a new or existing ventilation system in an affected space, the system shall be adjusted to provide the maximum amount of outside air possible with the system.
7. Efforts shall be made to install and operate new ventilation systems as soon in the construction process as practical.

K. ASBESTOS CONTAINING MATERIALS WARNING

1. Asbestos containing materials are known to exist in areas of the Work. This has been identified as **The mastic behind the ceramic tile in the shower rooms. There may also be asbestos containing pipe insulation concealed in the wall at the existing water fountain plumbing that is to be removed.** The Contractor shall not, in any way, disturb materials which are known to contain asbestos, assumed to contain asbestos, or otherwise have not been tested and confirmed to be asbestos free.
2. Where access to concealed spaces is required, or it is necessary to disturb building materials such as for drilling of holes, cutting, etc., notify the Owner so that proper investigation and/or removal procedures are followed.
3. Prior to commencing Work, the Contractor shall meet with the District Safety Specialist and review the Owner’s Asbestos Management Plan for the locations of asbestos-containing materials and/or materials assumed to contain asbestos. After reviewing the Owner’s Asbestos Management Plan, the Contractor is required to sign Form 01 11 00A, Asbestos-containing Materials Notification Statement, provided at the end of this Section.
4. Contractor must not install any asbestos-containing materials when performing the Work of this project. At the completion of the Work, Contractor will be required to furnish a

SUMMARY OF WORK – SECTION 01 11 00

statement stating that no asbestos-containing materials were installed during the course of the Work. Refer to Sample Form 01 11 00B at the end of this Section.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - SCHEDULE OF PRODUCTS ORDERED IN ADVANCE

4.1 NONE

PART 5 - ASBESTOS FORMS

Form 01 11 00A

**ASBESTOS-CONTAINING MATERIALS NOTIFICATION STATEMENT
FOR CONTRACTORS**

This form must be completed and signed by the Contractor prior to beginning work in any Eugene School District 4J building.

The presence of known and assumed asbestos containing materials is documented in the AHERA Management Plan for each building. Copies of the AHERA Management Plan are available in the main office of each building and in the Facilities Management Office at 715 West Fourth Avenue, Eugene, Oregon. The District Asbestos Specialist must be informed of the Contractor’s activities in each building prior to the start of work so that the Contractor can be informed on how to use the AHERA Management Plan and to determine if any asbestos-containing materials are likely to be impacted by the work of the Contractor.

The Contractor is responsible for notifying all employees and subcontractors of the presence of asbestos in the building. The Contractor shall not disturb known or assumed asbestos-containing materials. If the Contractor discovers suspected asbestos-containing materials that have not been identified, the Contractor must stop any work impacting the suspected materials and notify the District Asbestos Specialist so that the material can be sampled. Any asbestos-containing materials that must be removed to allow the Contractor to complete the Contractor’s work will be removed by the District under separate contract. If the Contractor disturbs asbestos-containing materials, the Contractor will be responsible for the cost of the cleanup and decontamination.

I _____, Representing _____,
(Print Name of Representative) (Business Name)

have been notified of the location of the AHERA Management Plan and agree to avoid impacting all known or assumed asbestos-containing materials in the performance of the Work.

Signature of Representative

Date

Work Site

CIP #

Form 01 11 00B

The Environmental Protection Agency (AHERA) rules require the School District obtain a signed statement from the Site Superintendent that, to the best of his/her knowledge, no asbestos-containing building materials were installed during the Work. Therefore, the following statement must be submitted on the Contractors letterhead prior to Project Closeout.

SAMPLE FORM

(To be submitted on the Contractor's letterhead)

ASBESTOS-CONTAINING MATERIALS STATEMENT

EUGENE SCHOOL DISTRICT 4J

(Name of Project and CIP Number)

We the undersigned, (Name of Company), hereby warrant that to the best of our knowledge all materials furnished for the above referenced project contain 0% asbestos.

(Name of Construction Company)

(Signature and Date)

Printed Name

Job Title

END OF SECTION 01 11 00

SECTION 01 25 00
CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
 - 1. Division 0 Document 00 52 13 “ Form of Agreement” for monetary values of established Unit Prices and Alternates.
 - 2. Division 0 Document 00 72 13 “General Conditions” for additional requirements for Changes in the Work, Contract Sum, and Contract Time.
 - 3. Division 1 Section 00 11 13 “Supplementary Conditions” for allowable percentages for Contractors’ Overhead and Profit.
 - 4. Division 1 Section 01 22 00 “Unit Prices” for administrative requirements for using unit prices.
 - 5. Division 1 Section 01 33 00“ Submittal Procedures” for Schedule of Values requirements.
 - 6. Division 1 Section 01 60 00 "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.
 - 7. Division 1 Section 01 78 39 “Project Record Documents” documentation requirements.

1.3 MINOR CHANGES IN THE WORK

- A. Architect, with the concurrence of the Owner, will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 CHANGE REQUEST/PROCEED ORDER (CONSTRUCTION CHANGE DIRECTIVE)

- A. Architect or Owner may issue a Change Request/Proceed Order on form included at end of Part 3.
 - 1. Change Request contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
 - 2. Proceed Order, when signed by the Owner, instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Proceed Order.

CONTRACT MODIFICATION PROCEDURES SECTION 01 25 00

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
- C. Authorization Required: When a Change Request is approved and signed by the Owner, it becomes a Proceed Order authorizing the change requested. Do not proceed with any change without the Owner's signature on the Change Request/Proceed Order.
- D. Owner-Initiated Change Requests: Architect will issue a Change Request, which will include a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
1. Change Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 2. Within time specified in Change Request after receipt of Change Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a complete cost breakdown including a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor, supervision, overhead, and profit directly attributable to the change.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- E. Contractor-Initiated Requests: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to the Architect.
1. Changes requested by the Contractor will be authorized only by signature of the Owner on the prescribed. Do not proceed with any changes without this authorization.
 2. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 3. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 4. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 5. Include costs of labor, supervision, overhead, and profit directly attributable to the change.
 6. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

CONTRACT MODIFICATION PROCEDURES SECTION 01 25 00

7. Comply with requirements in Division 1 Section 01 60 00 "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

F. Change Request Form: Use forms provided by Owner. Sample copies are included at end of Section 3.

1.5 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Change Request, and at intervals to be determined, Architect will collect Change Requests and issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

B. PRODUCTS (Not Used)

C. EXECUTION (Not Used)

CHANGE REQUEST/PROCEED ORDER

Capital Improvement Program/ Eugene Public School District No. 4J

CRPO Template

CHANGE REQUEST

Notice No: _____ Date: _____ Project No: _____ Project Title: _____ Contractor: _____	Executed copy distribution <input type="checkbox"/> Contractor: _____ <input type="checkbox"/> Architect: _____
--	--

1. REQUEST INFORMATION

Reason for Change: _____

2. DATES

Need for change first known: _____ By whom: _____
 How: _____
 Date approved: _____ By whom: _____

3. RECOMMENDATION:

PROCEED ORDER, COST AND SCHEDULE BREAKDOWN

Proceed Order No: _____ 1. PAYMENT/COST Actual amount of change: _____ Contractor Amount: _____ Subcontractor Amount: _____	The contract time will be: <input type="checkbox"/> increased <input type="checkbox"/> decreased by _____ days <input checked="" type="checkbox"/> will remain unchanged Type of payment (LS/T&M) _____
--	--

Proceed portion: Contractor is directed to proceed with the work, Time and Material, Not to Exceed: \$ _____

2. MISCELLANEOUS

Subcontractors involved: _____
 Major materials: _____

3. CHANGE REQUEST OR PROCEED ORDER ACCEPTED BY:

Contractor: _____	Date: _____
Architect: _____	Date: _____
4J CIP Project Manager: _____	Date: _____
4J CIP Program Manager: _____	Date: _____
4J Facilities Director: _____	Date: _____

Without the signature of Facilities Director, or the acting Director, the Proceed Order is not accepted or authorized, except by written authorization of other delegation.

END OF SECTION 01250

SECTION 01 29 00
PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 25 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Division 1 Section 01 27 00 "Unit Prices" for administrative requirements governing use of unit prices.
 - 3. Division 1 Section 01 32 00 "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.
 - 4. Division 1 Section 01 77 00 "Closeout Procedures" for final Application for Payment.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittals Schedule.
 - c. Contractor's Construction Schedule.
 - 2. Submit the Schedule of Values to Architect and Owner at earliest possible date but no later than seven days before the date scheduled for submittal of initial Application for Payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.

PAYMENT PROCEDURES – SECTION 01 29 00

1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
2. Submit draft of AIA Document G703 Continuation Sheets.
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.
6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.

PAYMENT PROCEDURES – SECTION 01 29 00

- C. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 2. Include amounts of Change Orders issued before last day of construction period covered by application.
 3. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours.
- D. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values (draft submitted previously).
 3. Contractor's Construction Schedule (preliminary if not final).
 4. Products list.
 5. Schedule of unit prices.
 6. Submittals Schedule (based Architect's list or required submittals).
 7. List of Contractor's staff assignments.
 8. Initial progress report.
 9. Report of preconstruction conference.
- E. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- F. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout procedures (See itemized list in Section 01 77 00 "Closeout Procedures").
 2. Updated final statement, accounting for final changes to the Contract Sum.
 3. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 4. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 5. AIA Document G707, "Consent of Surety to Final Payment."
 6. Evidence that claims have been settled.
 7. Final, liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

SECTION 01 31 00
PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Administrative and supervisory personnel.
 - 2. Project meetings.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 32 00 "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
 - 2. Division 1 Section 01 73 00 "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Division 1 Section 01 77 00 "Closeout Procedures" for coordinating Contract closeout.

1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
 - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.
 9. Project closeout activities.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.4 SUBMITTALS

- A. Key Personnel Names: Within 15 days of Notice-to-Proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including pager, cell, and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1.5 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Schedule meeting dates and times with Owner and Architect.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Architect will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, within three days of receiving them from the Architect.
- B. Preconstruction Conference: Owner's Project Manager will schedule a preconstruction conference before starting construction, no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Owner's Project Manager, Architect, and their consultants, as required; Contractor and its superintendent; major subcontractors; suppliers; and other concerned

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

- parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following (see sample agenda at the end of Part 3):
 - a. Introduction of persons present.
 - b. Tentative construction schedule.
 - c. Phasing.
 - d. Critical work sequencing and long-lead items.
 - e. Designation of key personnel and their duties.
 - f. Procedures for processing field decisions and Change Orders.
 - g. Procedures for requests for interpretations (RFIs).
 - h. Procedures for testing and inspecting.
 - i. Procedures for processing Applications for Payment.
 - j. Distribution of the Contract Documents.
 - k. Communications.
 - l. Role of District's Project Manager.
 - m. Submittal procedures, including MSDS information.
 - n. Energy design requirements.
 - o. Preparation of Record Documents.
 - p. Use of the premises and existing building.
 - q. Work hours and restrictions.
 - r. Owner's occupancy requirements.
 - s. Responsibility for temporary facilities and controls.
 - t. Construction waste management and recycling.
 - u. Parking availability.
 - v. Office, work, and storage areas.
 - w. Equipment deliveries and priorities.
 - x. Safety and first aid.
 - y. Security.
 - z. Progress cleaning.
 3. Minutes: Architect will record and distribute meeting minutes.
 4. Statements made by the Contracting Agency's representative at the pre-construction conference are not binding upon the Contracting Agency unless confirmed by Written Addendum.
- C. Preinstallation Conferences: When required by individual specification sections, conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect and Owner's Project Manager a minimum of four days prior to scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract documents.
 - b. Related requests for interpretations (RFIs).
 - c. Related Change Orders.

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

- d. Purchases.
 - e. Deliveries.
 - f. Submittals.
 - g. Possible conflicts.
 - h. Compatibility problems.
 - i. Time schedules.
 - j. Weather limitations.
 - k. Manufacturer's written recommendations.
 - l. Warranty requirements.
 - m. Compatibility of materials.
 - n. Acceptability of substrates.
 - o. Space and access limitations.
 - p. Regulations of authorities having jurisdiction.
 - q. Testing and inspecting requirements.
 - r. Installation procedures.
 - s. Coordination with other work.
 - t. Required performance results.
 - u. Protection of adjacent work.
- 3. Contractor to record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 - 4. Distribute minutes of the meeting to each party present and to parties who should have been present, within three working days.
 - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings: Conduct progress meetings at weekly intervals. Coordinate dates of meetings with preparation of payment requests.
- 1. Attendees: In addition to the Owner's Project Manager and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Provide in a format no larger than 11x17" and discuss a 3 week look-ahead schedule. The look-ahead schedule is required to be directly from the Project Master Schedule and to only show 3 weeks of work. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

- b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Status of correction of deficient items.
 - 14) Field observations.
 - 15) Requests for interpretations (RFIs).
 - 16) Status of proposal requests.
 - 17) Pending changes.
 - 18) Status of Change Orders.
 - 19) Pending claims and disputes.
 - 20) Documentation of information for payment requests.
- 3. Minutes: Architect will record and distribute to Contractor the meeting minutes.
- 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PRECONSTRUCTION CONFERENCE AGENDA (SAMPLE)

Eugene School District 4J
[Enter Project Name]

[Date]

AGENDA

1. Introduction of Persons Present
 - District 4J
 - Consultants
 - Contractor (including job foreman)
 - Subcontractors

2. Availability of Contract Documents

3. Building Permit Status
 - Plan check and Building Permit paid by District
 - Pick up Permit at City of Eugene by Contractor
 - Location of site stored approved contract documents
 - Utility permits
 - LRAPA Permit

4. Prevailing Wage Requirements
 - Submittal schedule
 - Conformance with requirements

5. Communications
 - Notification of problems

6. Role of District's representative
 - Limits of authority
 - Visitation schedules

7. Work Description and Schedule
 - General work description
 - Proposed start date: _____
 - Proposed completion date: _____
 - Proposed project schedule and phasing
 - Progress schedule updates
 - Methods to be employed to maintain schedule
 - Work requiring Shop Drawings or submittals shall not commence until review is complete.

8. Submittals Required per Contract Documents
 - MSDS Information
 - Written proof of Asbestos Worker Certification
 - Name, Experience and Qualifications of Asbestos Supervisor
 - Copy of Contractor's Asbestos Abatement License
 - Other information as required by Section 01 31 00.

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

- Schedule of values
- List of subcontractors including name of contact person, telephone number, and address

- 9. Construction
 - Working hours
 - Use of premises/set up locations
 - Protection of existing facilities
 - Traffic and protection
 - Excavation and clean-up
 - Weather restrictions
 - Deviation from details and/or specifications

- 10. Correction of Defects
 - Daily and/or as observed

- 11. Weekly On-Site Progress Meetings
 - Establish day and time: Day _____ Time _____
 - Provide updated project schedules
 - Discuss project progress, problems, etc.
 - Review applications for payment
 - Required attendance
 - Observation report distribution

- 12. Change Order Requests and Change Order Procedures
 - Written Change Order requests required
 - Supporting back-up will be required for all Change Orders
 - Mark-up limitations on Change Orders
 - Contractor - 15 percent
 - Subcontractors - 10 percent
 - Progressive requests and Change Orders
 - Processing time required

- 13. Applications for Payment
 - Use AIA documents G702 and G703 latest edition
 - Provide 5 signed and notarized copies
 - Wage certifications to be attached

- 14. Safety and Emergency Procedures

- 15. Clean-up Daily
 - Project completion

- 16. Project Closeout
 - Inspections for
 - Air Clearance
 - AHERA Close Out Requirements
 - Substantial completion
 - Contractor provided list of items to be completed
 - Inspection with job foreman
 - Final Acceptance
 - Written notice from Contractor that all work is done and ready for inspection

PROJECT MANAGEMENT AND COORDINATION – SECTION 00 31 00

- Inspection with job foreman
- Responsibility for cost of additional inspections
- Submittals for Closeout
 - Final application for payment
 - Final set of wage certifications
 - Release of liens from all Subcontractors and general Contractor
- 17. Tour of Project Sites to Examine and Document Existing Conditions
- 18. Additional Comments

The undersigned acknowledges that the items listed above were discussed during this preconstruction conference and are fully understood.

Date:

A/E Firm:

Contractor:

Subcontractors:

END OF SECTION 01 31 00

SECTION 01 32 00
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Preliminary Construction Schedule.
2. Contractor's Construction Schedule.
3. Submittals Schedule.

- B. Related Sections include the following:

1. Division 1 Section 01 29 00 "Payment Procedures" for submitting the Schedule of Values.
2. Division 1 Section 01 31 00 "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
3. Division 1 Section 01 33 00 "Submittal Procedures" for submitting schedules and reports.
4. Division 1 Section 01 40 00 "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 SUBMITTALS

- A. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format.

1. Scheduled date for first submittal.
2. Specification Section number and title.
3. Submittal category (action or informational).
4. Name of subcontractor.
5. Description of the Work covered.
6. Scheduled date for Architect's final release or approval.

- B. Contractor's Construction Schedule: Submit two opaque copies of initial schedule, large enough to show entire schedule for entire construction period.

1.4 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

CONSTRUCTION PROGRESS DOCUMENTATION – SECTION 01 32 00

- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
 - 2. Initial Submittal: List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
- B. Activities: Treat each floor or separate area as a separately numbered activity for each principal element of the Work
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
- D. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 1 Section 01 11 00 "Summary of Work." Delivery dates indicated stipulate the earliest possible delivery date.
- E. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Division 1 Section 01 11 00 "Summary of Work." Delivery dates indicated stipulate the earliest possible delivery date.
- F. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- G. Cost Correlation: At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.

CONSTRUCTION PROGRESS DOCUMENTATION – SECTION 01 32 00

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within 10 days of date established for the Notice to Proceed.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect, Owner's Project Manager, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 01 32 00

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, Information Submittals, Delegated Design and other submittals.
- B. Related Sections include the following:
1. Division 1 Section 01 29 00 "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
 2. Division 1 Section 01 31 00 "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 3. Division 1 Section 01 32 00 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
 4. Division 1 Section 01 40 00 "Quality Requirements" for submitting test and inspection reports and for mockup requirements, if any.
 5. Division 1 Section 01 77 00 "Closeout Procedures" for submitting warranties.
 6. Division 1 Section 01 78 23 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 7. Division 1 Section 01 78 39 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 8. Divisions 2 through 49 Sections for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

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

1.4 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

SUBMITTAL PROCEDURES – SECTION 01 33 00

2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
- B. Submittals Schedule: Comply with requirements in Division 1 Section 01 32 00 "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 14 calendar days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
- D. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
- E. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- F. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, if received from sources other than Contractor without prior consent.
1. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Drawing number and detail references, as appropriate.
 - j. Submittal and transmittal distribution record.
 - k. Remarks.
 - l. Signature of transmitter.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.

SUBMITTAL PROCEDURES – SECTION 01 33 00

3. Resubmit submittals until they are marked “Approved”.
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Use only final submittals with mark indicating “Approved” marked by Architect.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Standard color charts.
 - e. Manufacturer's catalog cuts.
 - f. Wiring diagrams showing factory-installed wiring.
 - g. Printed performance curves.
 - h. Operational range diagrams.
 - i. Compliance with specified referenced standards.
 - j. Testing by recognized testing agency.
 - k. Application of testing agency labels and seals.
 - l. Notation of coordination requirements.
 - m. MSDS information, where applicable.
 4. Submit Product Data before or concurrent with Samples.
 5. Number of Copies: Submit the number required by the Contractor plus one digital copy of Product Data, unless otherwise indicated. Architect will return two copies to Contractor and one to Owner. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.

SUBMITTAL PROCEDURES – SECTION 01 33 00

- c. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - d. Schedules.
 - e. Design calculations.
 - f. Compliance with specified standards.
 - g. Notation of coordination requirements.
 - h. Notation of dimensions established by field measurement.
 - i. Relationship to adjoining construction clearly indicated.
 - j. Seal and signature of professional engineer if specified.
2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
 3. Number of Copies: Submit four opaque copies of each submittal, unless copies are required for operation and maintenance manuals. Submit five copies where copies are required for operation and maintenance manuals. Architect will retain two copies, including one for the Owner's Project Manager; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor..
- c. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Architect will not return copies.

SUBMITTAL PROCEDURES – SECTION 01 33 00

2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 3. Test and Inspection Reports: Comply with requirements specified in Division 1 Section 01 40 00 "Quality Requirements."
- B. Coordination Drawings: Comply with requirements specified in Division 1 Section 01 31 00 "Project Management and Coordination."
 - C. Contractor's Construction Schedule: Comply with requirements specified in Division 1 Section 01 32 00 "Construction Progress Documentation."
 - D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
 - E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
 - F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
 - G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
 - H. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
 - I. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
 - J. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
 - K. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
 - L. Schedule of Tests and Inspections: Comply with requirements specified in Division 1 Section 01 40 00 "Quality Requirements."
 - M. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

SUBMITTAL PROCEDURES – SECTION 01 33 00

- N. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- O. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- P. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 1 Section 01 78 23 "Operation and Maintenance Data."
- Q. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- R. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.
- S. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- T. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Architect.

2.3 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 33 00

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Division 1 Section 01 32 00 "Construction Progress Documentation" for developing a schedule of required tests and inspections.
 - 2. Divisions 2 through 49 Sections for specific test and inspection requirements.

1.3 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.4 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and submit certified written reports that include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and reinspecting.
- C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Payment for these services will be made by Owner.
 - 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 - 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.

QUALITY REQUIREMENTS – SECTION 01 40 00

3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section 01 33 00 "Submittal Procedures."
- D. **Retesting/Reinspecting:** Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. **Testing Agency Responsibilities:** Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- F. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. **Coordination:** Coordinate sequence of activities to accommodate required quality-assurance and control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

QUALITY REQUIREMENTS – SECTION 01 40 00

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.6 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of the Owner, described as follows:

NONE

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
 1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 11 00 "Summary of Work" for limitations on utility interruptions and other work restrictions.
 - 2. Division 1 Section 01 33 00 "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
 - 3. Division 1 Section 01 77 00 "Execution Requirements" for progress cleaning requirements.
 - 4. Divisions 2 through 49 Sections for temporary heat, ventilation, and humidity requirements for products in those Sections.

1.3 DEFINITIONS

- A. Permanent Enclosure: As determined by Architect, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.4 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies, and authorities having jurisdiction.

1.5 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.6 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

TEMPORARY FACILITIES AND CONTROLS – SECTION 01 50 00

- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.7 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. **NONE**

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of construction personnel. Keep office clean and orderly. Furnish and equip offices as follows:
 - 1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
 - 2. Conference room of sufficient size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with not less than 1 receptacle on each wall. Furnish room with conference table, chairs, and 4-foot- square tack board.
 - 3. Drinking water and private toilet.
 - 4. Coffee machine and supplies.
 - 5. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
 - 6. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. Heating Equipment: Unless Owner authorizes use of permanent heating system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

TEMPORARY FACILITIES AND CONTROLS – SECTION 01 50 00

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
 - 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- E. Heating: Provide temporary heating required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- F. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- G. Electric Power Service: Use of Owner's existing electric power service will be permitted, as long as equipment is maintained in a condition acceptable to Owner.
- H. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
 - 1. Connect temporary service to Owner's existing power source, as directed by Owner.
- I. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

TEMPORARY FACILITIES AND CONTROLS – SECTION 01 50 00

1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
 2. Install lighting for Project identification sign.
- J. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install two telephone line(s) for each field office.
1. At each telephone, post a list of important telephone numbers.
 - a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Architect's office.
 - e. Engineers' offices.
 - f. Owner's office.
 - g. Principal subcontractors' field and home offices.
 2. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
1. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet of building lines. Comply with NFPA 241.
 2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas as indicated on Drawings.
1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
- C. Traffic Controls: Comply with requirements of authorities having jurisdiction.
1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- D. Parking: Arrange for temporary parking areas for construction personnel.
- E. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 2. Remove snow and ice as required to minimize accumulations.

TEMPORARY FACILITIES AND CONTROLS – SECTION 01 50 00

- F. Project Identification and Temporary Signs: Provide Project identification and other signs as indicated on Drawings. Install signs where indicated to inform public and individuals seeking entrance to Project. Unauthorized signs are not permitted.
 - 1. Provide temporary, directional signs for construction personnel and visitors.
 - 2. Maintain and touchup signs so they are legible at all times.
- G. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 1 Section 01 77 00 "Execution Requirements" for progress cleaning requirements.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - 1. Comply with work restrictions specified in Division 1 Section 01 11 00 "Summary of Work."
- B. Temporary Erosion and Sedimentation Control: Comply with requirements specified in Division 2 Section "Site Clearing", and requirements of authority having jurisdiction.
- C. Stormwater Control: Comply with authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- D. Tree and Plant Protection: Comply with requirements specified in Division 2 Section "Tree Protection and Trimming."
- E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- F. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
 - 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
 - 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Provide Owner with one set of keys.
- G. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
- H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

TEMPORARY FACILITIES AND CONTROLS – SECTION 01 50 00

- I. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.
- J. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.
 - 1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant plywood on construction operations side.
 - 2. Insulate partitions to provide noise protection to occupied areas.
 - 3. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
 - 4. Protect air-handling equipment.
 - 5. Weather strip openings.
 - 6. Provide walk-off mats at each entrance through temporary partition.
- K. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 - 1. Prohibit smoking in construction areas.
 - 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 - 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 - 4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

END OF SECTION 01 50 00

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 23 00 "Alternates" for products selected under an alternate.
 - 2. Division 1 Section 01 77 00 "Closeout Procedures" for submitting warranties for Contract closeout.
 - 3. Divisions 2 through 49 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

- A. Substitution Requests: Instructions to Bidders specify time restrictions for submitting requests for Substitutions during the bidding period, in compliance with this Section.
- B. After execution of Agreement, the Owner may, at the Owner's option, consider formal requests from the Contractor for substitution of products for those specified. One or more of the following conditions must be documented:
 - 1. Compliance with final interpretation of code requirements or insurance regulations which require that the use of a substituted Product.
 - 2. Unavailability of a specified Product through no fault of the Contractor.

PRODUCT REQUIREMENTS – SECTION 01 60 00

3. Inability of specified Product to perform properly of fit in designated place.
 4. Manufacturer's or Fabricator's refusal or inability to certify or guarantee performance of a specified Product in the application intended.
- C. A Substitution Request constitutes a representation that the Bidder/Contractor:
1. Has investigated the proposed Product and determined that it meets or exceeds the quality level of the specified Product.
 2. Will provide the same warranty for the Substituted Product as for the specified Product.
 3. Will coordinate installation and make changes to the Work which may be required for the Work to be completed with no additional cost to the Owner.
 4. Waives claims for additional costs or time extension which may subsequently become apparent.
 5. Will reimburse the Owner for review or redesign services associated with re-approval by authorities.
- D. Substitutions will not be considered when they are indicated or implied on Shop Drawings or Product Data Submittals, without separate request on the form provided, or when acceptance will require revision to the Contract Documents.
- E. Submit three copies of each request for consideration. Limit each request to one proposed Substitution. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Substitution Request Form: Use form provided at end of Section.
 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Provide MSDS information to confirm that the product is no more harmful than the products specified.
 - f. Samples, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - j. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided

PRODUCT REQUIREMENTS – SECTION 01 60 00

within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.

- k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
- a. Form of Acceptance: Change Order.
 - b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- C. Storage:
 - 1. Store products to allow for inspection and measurement of quantity or counting of units.
 - 2. Store materials in a manner that will not endanger Project structure.
 - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - 4. Store cementitious products and materials on elevated platforms.

PRODUCT REQUIREMENTS – SECTION 01 60 00

5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.
8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.
9. Provide bonded and insured off-site storage and protection when site does not permit on-site storage and protection.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Submittal Time: Comply with requirements in Division 1 Section 01 77 00 "Closeout Procedures."

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

SUBSTITUTION REQUEST FORM

TO: Rodd Hansen Architect
1551 Oak Street, Suite A
Eugene, OR 97401

DEADLINE: Date

PROJECT: SEHS Women’s Locker Room Remodel 2018
Eugene School District 4J

SPECIFIED ITEM: Section No. Paragraph Description

The Undersigned requests consideration of the following substitution:

The Undersigned states that the following paragraphs are true, except where noted otherwise:

- 1. The function, appearance and quality of the proposed substitution are equivalent or superior to the specified item;
2. The proposed substitution does not affect dimensions shown on the Drawings;
3. The Undersigned will pay for changes to the building design, including engineering and design services, detailing and construction costs caused by the requested substitution;
4. The proposed substitution will have no adverse effect on other trades, the construction schedule, or specified warranty requirements;
5. Maintenance and service parts will be locally available for the proposed substitution;
6. The Undersigned has attached data concerning the proposed substitution, including: Manufacturers product description, specifications, drawings, photographs, performance and test data, adequate for evaluation of the request, with applicable portions of the data clearly indicated. Attachments also include description of changes to Contract Documents which the proposed substitution will require for its proper installation.

Submitted by: _____
Signature: _____
Firm: _____
Address: _____
Date: _____
Tel: _____ Fax: _____
Attachments: _____
For use by Architect:
[] Approved [] Approved as noted.
[] Not Approved [] Received too late
By: _____
Date: _____
For use by 4J Project Manager:
[] Approved [] Approved as noted.
[] Not Approved [] Received too late
By: _____
Date: _____

END OF SECTION 01 60 00

SECTION 01 73 00
EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

- 1. Construction layout.
- 2. Field engineering and surveying.
- 3. General installation of products.
- 4. Coordination of Owner-installed products.
- 5. Progress cleaning.
- 6. Starting and adjusting.
- 7. Protection of installed construction.
- 8. Correction of the Work.

- B. Related Sections include the following:

- 1. Division 1 Section 01 31 00 "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
- 2. Division 1 Section 01 33 00 "Submittal Procedures" for submitting surveys.
- 3. Division 1 Section 01 77 00 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.3 SUBMITTALS

- A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.
- B. Final Property Survey: Submit 2 copies showing the Work performed and record survey data.

1.4 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 5. Proceed with installation only after unsatisfactory conditions have been corrected.
PROCEEDING WITH THE WORK INDICATES ACCEPTANCE OF SURFACES AND CONDITIONS.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility

EXECUTION REQUIREMENTS – SECTION 01 73 00

appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect and Owner's Project Manager promptly.
 - 1. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
- B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- C. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect and Owner's Project Manager.

3.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
- C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.

EXECUTION REQUIREMENTS – SECTION 01 73 00

2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 4. Maintain minimum headroom clearance of seven feet in spaces without a suspended ceiling.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated. Bring any conflicts to the Architect for review.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- G. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints where possible. Obtain Architect and Owner's Project Manager approval for all questionable conditions.
- H. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction forces.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction forces.
 - 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 - 2. Preinstallation Conferences: Include Owner's construction forces at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction forces if portions of the Work depend on Owner's construction.

3.7 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to applicable regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for safety and proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

EXECUTION REQUIREMENTS – SECTION 01 73 00

- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.8 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section 01 40 00 "Quality Requirements."

3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.10 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

EXECUTION REQUIREMENTS – SECTION 01 73 00

END OF SECTION 01 73 00

CUTTING AND PATCHING
SECTION 01 73 29

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections include the following:
 - 1. Division 1 Section 10 31 00 – “Project Management and Coordination” for pre-construction and pre-installation conferences.
 - 2. Division 2 Section "Selective Demolition" for demolition of selected portions of the building.
 - 3. Divisions 2 through 49 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a written request describing procedures prior to the time cutting and patching will be performed, requesting approval to proceed, for cutting or alteration which affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather-exposed or moisture-resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of site-exposed elements.
 - 5. Work of Owner or separate contractor.
- B. Include the following information:
 - 1. Identification of Project and CIP number
 - 2. Location and description of the affected Work.
 - 3. Necessity for cutting or alteration.
 - 4. Description of proposed Work and Products to be used.
 - 5. Alternatives to cutting and patching.
 - 6. Effect on work of Owner or separate contractor.
 - 7. Written permission of affected separate contractor, if any.

8. date and time work will be executed.

1.5 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
 1. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
 2. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
- B. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.

CUTTING AND PATCHING - SECTION 01 73 29

2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 01 73 29

SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Inspection procedures.
2. Warranties.
3. Final cleaning.

- B. Related Sections include the following:

1. Division 1 Section 01 29 00 "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
2. Division 1 Section 01 73 00 "Execution Requirements" for progress cleaning of Project site.
3. Division 1 Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.
4. Division 1 Section 01 78 39 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
5. Divisions 2 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Advise Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Prepare and submit Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.

CLOSEOUT PROCEDURES - SECTION 01 77 00

7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
8. Complete startup testing of systems.
9. Submit test/adjust/balance records.
10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
11. Advise Owner of changeover in heat and other utilities.
12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect and Owner's Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit the following completed forms, items and documents:
 - a. AIA Document G706 Contractor's Affidavit of Payment of Debts and Claims.
 - b. AIA Document G706A Contractor's Affidavit of Release of Liens.
 - c. AIA Document G707 Consent of Surety Company to Final Payment.
 - d. Operation and Maintenance Manuals
 - e. Warranties and Bonds. Submit original documents, including Contractor's General Warranty,
 - f. Record Documents.
 - g. Keys.
 - h. Testing and Start-Up records.
 - i. Affidavit of Prevailing Wages paid.
 - j. Complete list of Contractor and all Subcontractors with address, phone numbers, and work

- k. Asbestos-Containing Materials Statement (Form 01100B).
 - l. Proof of final acceptance and compliance from governing authorities having jurisdiction.
 - m. Certificate of insurance evidencing continuation of liability coverage including coverage for completed operations until the expiration of the specified warranty periods.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect and Owner's Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Cost of additional re-inspections by Architect and Owner's Project manager will be deducted from Final Payment to the Contractor.

1.5 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Partial Occupancy: Submit properly executed warranties within 10 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive **8-1/2-by-11-inch (215-by-280-mm)** paper. Provide digital copy as well.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

MATERIALS

- A. **Cleaning Agents:** Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. **General:** Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. **Cleaning:** Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
 - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

CLOSEOUT PROCEDURES - SECTION 01 77 00

- 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - m. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - n. Replace parts subject to unusual operating conditions.
 - o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - q. Clean ducts, blowers, and coils if units were operated without filters during construction.
 - r. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
 - s. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01 77 00

SECTION 01 78 23
OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation and maintenance documentation directory.
 - 2. Emergency manuals.
 - 3. Operation manuals for systems, subsystems, and equipment.
 - 4. Maintenance manuals for the care and maintenance of products, material, finishes, systems, and equipment.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 33 00 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
 - 2. Division 1 Section 01 77 00 "Closeout Procedures" for submitting operation and maintenance manuals.
 - 3. Division 1 Section 01 78 39 "Project Record Documents" for preparing Record Drawings for operation and maintenance manuals.
 - 4. Divisions 2 through 49 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 SUBMITTALS

- A. Initial Submittal: Submit 1 draft copy of each manual at least 15 working days before requesting inspection for Substantial Completion. Include a complete operation and maintenance directory. Architect will return one copy of draft and mark whether general scope and content of manual are acceptable.
- B. Final Submittal: Submit one copy of each manual in final form at least 10 days before final inspection. Architect will return copy with comments within 15 days after final inspection.

OPERATION AND MAINTENANCE DATA – SECTION 01 78 23

1. Correct or modify each manual to comply with Architect's comments. Submit 2 hard copies and one electronic copy of each corrected manual within 15 days of receipt of Architect's comments.

1.5 COORDINATION

- A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Organization: Include a section in the directory for each of the following:
 1. List of documents.
 2. List of systems.
 3. List of equipment.
 4. List of all subcontractors and material suppliers, including names, addresses and phone numbers.
 5. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 MANUALS, GENERAL

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 1. Title page.
 2. Table of contents.
 3. Manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
 1. Subject matter included in manual.
 2. Name and address of Project.

OPERATION AND MAINTENANCE DATA – SECTION 01 78 23

3. Name and address of Owner.
 4. Date of submittal.
 5. Name, address, and telephone number of Contractor.
 6. Name and address of Architect.
 7. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold **8-1/2-by-11-inch (215-by-280-mm)** paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include a Table of Contents for each volume with a list of products and major components of equipment included in the section on the face of each divider, cross-referenced to Specification Section number and title of Project Manual.
 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software media for computerized electronic equipment.
 4. Supplementary Text: Prepared on **8-1/2-by-11-inch (215-by-280-mm)** white bond paper.
 5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
 - 1. Type of emergency.
 - 2. Emergency instructions.
 - 3. Emergency procedures.
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
 - 1. Fire.
 - 2. Flood.
 - 3. Gas leak.
 - 4. Water leak.
 - 5. Power failure.
 - 6. Water outage.
 - 7. System, subsystem, or equipment failure.
 - 8. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
 - 1. Instructions on stopping.
 - 2. Shutdown instructions for each type of emergency.
 - 3. Operating instructions for conditions outside normal operating limits.
 - 4. Required sequences for electric or electronic systems.
 - 5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
 - 1. System, subsystem, and equipment descriptions.
 - 2. Performance and design criteria if Contractor is delegated design responsibility.
 - 3. Operating standards.
 - 4. Operating procedures.
 - 5. Operating logs.
 - 6. Wiring diagrams.
 - 7. Control diagrams.
 - 8. Piped system diagrams.
 - 9. Precautions against improper use.
 - 10. License requirements including inspection and renewal dates.

OPERATION AND MAINTENANCE DATA – SECTION 01 78 23

- B. Descriptions: Include the following:
1. Product name and model number.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
1. Startup procedures.
 2. Equipment or system break-in procedures.
 3. Routine and normal operating instructions.
 4. Regulation and control procedures.
 5. Instructions on stopping.
 6. Normal shutdown instructions.
 7. Seasonal and weekend operating instructions.
 8. Required sequences for electric or electronic systems.
 9. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

OPERATION AND MAINTENANCE DATA – SECTION 01 78 23

1. Inspection procedures.
 2. Types of cleaning agents to be used and methods of cleaning.
 3. List of cleaning agents and methods of cleaning detrimental to product.
 4. Schedule for routine cleaning and maintenance.
 5. Repair instructions.
 6. Contact information.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
1. Standard printed maintenance instructions and bulletins.
 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 3. Identification and nomenclature of parts and components.
 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
 6. Demonstration and training videotape, if available.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.

OPERATION AND MAINTENANCE DATA – SECTION 01 78 23

2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
 3. Electronic Copy: Provide a single PDF file with bookmarks matching tabbed sections in Binders.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.

OPERATION AND MAINTENANCE DATA – SECTION 01 78 23

1. Do not use original Project Record Documents as part of operation and maintenance manuals.
 2. Comply with requirements of newly prepared Record Drawings in Division 1 Section 01 78 39 "Project Record Documents."
- G. Comply with Division 1 Section 01 77 00 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 78 23

SECTION 01 78 39
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 77 00 "Closeout Procedures" for general closeout procedures.
 - 2. Division 1 Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 3. Divisions 2 through 49 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.3 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit copies of Record Drawings as follows:
 - a. Final Submittal: Submit one set of marked-up Record Prints (not "Job Shack" set).
(One digital set & one hard copy)
- B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications. (One digital set & one hard copy)
- C. Record Product Data: Submit one copy of each Product Data submittal.
(One digital set & one hard copy)
 - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.

PROJECT RECORD DOCUMENTS – SECTION 01 78 39

1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations below first floor.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Duct size and routing.
 - i. Locations of concealed internal utilities.
 - j. Changes made by Change Order.
 - k. Changes made following Architect's written orders.
 - l. Details not on the original Contract Drawings.
 - m. Field records for variable and concealed conditions.
 - n. Record information on the Work that is shown only schematically.
 3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Record Transparencies: Organize into unbound sets matching Record Prints. Place transparencies in durable tube-type drawing containers with end caps. Mark end cap of each container with identification. If container does not include a complete set, identify Drawings included.
 3. Identification: As follows:
 - a. Project name.

- b. Date.
- c. Designation "PROJECT RECORD DRAWINGS."
- d. Name of Architect and Owner's Project Manager.
- e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's and Owner's Project Manager's reference during normal working hours.

END OF SECTION 10 78 39

**SELECT DEMOLITION
SECTION 02 60 00**

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and other Conditions and Division 1 - General Requirements sections, apply to the work specified in this Section.

1.02 WORK INCLUDED

- A. Demolish designated portions of structures.
- B. Provide shoring.
- C. Disconnect, cap, and remove and identify utilities.
- D. Remove materials from site.
- E. Selected salvaged materials

1.03 RELATED WORK

- A. Section 01010 - Summary of Work: - Precautions Concerning Asbestos.
- B. Section 01500 – Construction Facilities and Temporary Controls: Barricades and landscape protection.
- C. Section 01500 – Construction Facilities and Temporary Controls: Dust control.
- D. Section 01500 – Construction Facilities and Temporary Controls: Cleaning during construction.
- E. Section 01700 - Contract Closeout: Project record documents.

1.04 SUBMITTALS

- A. Submit demolition and removal procedures and schedule under provisions of Section 01300.
- B. Permits and notices authorizing demolition.
- C. Permit for transport and disposal of debris.
- D. Submit record documents under provisions of Section 01700.

1.05 EXISTING CONDITIONS

- A. Conduct demolition to minimize interference with adjacent structures and school activities.
- B. Provide, protect, and maintain temporary barriers and security devices.
- C. Arrange and pay for disconnecting, removing, and capping utility services within areas of demolition. Disconnect and stub off.
- D. Conduct operations with minimum interference to public or private thoroughfares. Maintain protected egress and access at all times.

- E. Do not close or obstruct roadways or sidewalks without permits.
- F. Maintain mechanical and electrical services to Owner occupied areas.
- G. Provide, erect and maintain protected pedestrian egress at all times.

1.06 **PRE-DEMOLITION MEETING**

- A. Contractor to schedule meeting minimum of seven (7) days prior to start of demolition.
- B. Attendance: Contractor, demolition superintendent, Architect and District representative.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 **PREPARATION**

- A. Prevent movement or settlement of adjacent structures. Provide appropriate bracing and shoring in order to adequately support structure while installing new supporting structural elements.
- B. Erect and maintain waterproof closures for exterior openings.
- C. Protect existing structures which are not to be demolished.
- D. Disconnect, remove, and cap designated utility lines within demolition areas.
- E. Mark location of disconnected utilities. Identify utilities and indicate capping locations on Project Record Documents.
- F. Collaborate with Owner and provide an inventory of items in the existing structure that are to be salvaged and retained by the Owner. Determine who is to salvage the items, the Owner or Contractor and a time table for when the salvaged items are to be removed.

3.02 **EXECUTION**

- A. Noise Control:
 - 1. Maintain a reasonable degree of quietness throughout progress of the Work so as to not disturb classes in session in adjoining rooms or buildings or annoy residents of the neighborhood. Rotary machines and tools must operate below OSHA noise and fume standards.
- B. Demolish indicated structures and appurtenances in an orderly and careful manner.
- C. Stage demolition as necessary to meet Owners access/egress and mechanical/electrical requirements.
- D. Cease operations and notify Architect immediately if adjacent structures appear to be endangered. Do not resume operations until corrective measures have been taken.

SELECT DEMOLITION - SECTION 02 60 00

- E. The Contractor shall employ a demolition foreman knowledgeable in identification of asbestos containing materials and shall instruct workmen at the Site to be on the look-out for materials that may contain asbestos fibers and to not disturb or attempt to remove such materials.
- F. The Contractor shall carefully demolish walls, etc., which contain concealed space to allow visual inspection for any material which may be suspect of containing asbestos fibers prior to scheduled demolition.
- G. Asbestos Containing Materials:
 - 1. The District, under separate contract, will remove all identified asbestos containing materials.
 - 2. Prior to beginning work the demolition foreman will be required to review the asbestos management plan with Doug Lemonds, District asbestos Specialist. Foreman will then be required to sign a statement that the review has taken place.
 - 3. If during the demolition the contractor locates materials that may be asbestos containing, stop all work that may impact the material. Contact Facilities. Doug Lemonds will test the material to determine if asbestos is present. If test results are positive for asbestos, the district will have the materials removed by an asbestos contractor.
- H. The Contractor shall take every precaution to prevent the spread of asbestos fibers throughout the Work under this Contract. The Contractor shall not break up and/or attempt to remove or actually remove from the Work area any material suspected of containing asbestos fibers (i.e., pipe insulation, sprayed on fireproofing).
- I. Asbestos fibers carried around the Work area or into the existing structure due to the Contractor's carelessness or failure to follow the procedures herein shall, at the Contractor's expense, be cleaned up in accordance with E.P.A. requirements.
- J. Except where noted otherwise, immediately remove demolished material from site.
- K. Remove materials to be re-installed or retained in a manner to prevent damage. Store and protect under provisions of Section 01500.
- L. Remove and promptly dispose of contaminated, vermin infested, or dangerous materials encountered.
- M. Do not burn or bury materials on site.
- N. Keep work sprinkled to minimize dust. Provide hoses and water main or hydrant connections for this purpose as approved by governing authority.
- O. Backfill areas excavated as a result of demolition as required to subgrade. Use backfill material specified in Section 02223.
- P. Rough grade and compact areas affected by demolition to subgrade maintain site grades and contours.
- Q. Remove demolished materials from site as work progresses. Leave site in clean condition.

END OF SECTION

ROUGH CARPENTRY
SECTION 06 10 00

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Floor sheathing / underlayment.
- B. Wall sheathing.
- C. Roof sheathing.
- D. Roof-mounted curbs.
- E. Roofing nailers.
- F. Preservative treated wood materials.
- G. Fire retardant treated wood materials.
- H. Miscellaneous framing and sheathing.
- I. Wood nailers associated with roofing and flashing.
- J. Miscellaneous wood nailers, furring, and grounds.

1.02 RELATED REQUIREMENTS

- A. Section 07 21 00 - Thermal Insulation: Composite polyisocyanurate board insulation faced with plywood.
- B. Section 07 54 00 - Thermoplastic Membrane Roofing.

1.03 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- B. ASTM D2898 - Standard Test Methods for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing; 2010.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2014.
- D. AWPA U1 - Use Category System: User Specification for Treated Wood; American Wood Protection Association; 2012.
- E. PS 1 - Structural Plywood; 2009.
- F. PS 2 - Performance Standard for Wood-Based Structural-Use Panels; National Institute of Standards and Technology, U.S. Department of Commerce; 2010.
- G. PS 20 - American Softwood Lumber Standard; National Institute of Standards and Technology, Department of Commerce; 2010.

1.04 QUALITY ASSURANCE

- A. Lumber: Comply with PS 20 and approved grading rules and inspection agencies.
 - 1. Acceptable Lumber Inspection Agencies: Any agency with rules approved by American Lumber Standards Committee.
- B. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

- B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, or installation.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 - 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
- B. Lumber fabricated from old growth timber is not permitted.

2.02 DIMENSION LUMBER

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.
- D. Lumber to Receive Preservative Pressure Treatment:
 - 1. Species: Hem-fir.
 - 2. Grade: No. 2.

2.03 CONSTRUCTION PANELS

- A. Subfloor/Underlayment Combination: PS 1 or PS 2, rated Single Floor.
 - 1. Bond Classification: Exterior.
 - 2. Span Rating: As indicated on Drawings.
 - 3. Performance Category: As indicated on Drawings.
 - 4. Edges: Tongue and groove.
- B. Subflooring: APA Floor Sheathing; plywood.
 - 1. Bond Classification: Exterior.
 - 2. Span Rating: As indicated on Drawings.
 - 3. Thickness: As indicated on Drawings.
- C. Underlayment: APA Underlayment; plywood, Exposure 2, 1/2 inch thick; fully sanded face; fire-retardant treated.
- D. Roof Sheathing: PS1 or PS 2.
 - 1. Grade: Structural 1 Sheathing.
 - 2. Bond Classification: Exposure 1.
 - 3. Performance Category: As indicated on Drawings.
 - 4. Span Rating: As indicated on Drawings.
 - 5. Edges: Tongue and groove.
- E. Wall Sheathing: PS 1 or PS 2 type.
 - 1. Bond Classification: Exterior.
 - 2. Grade: Structural I Sheathing.
 - 3. Span Rating: As indicated on Drawings.
 - 4. Performance Category: As indicated on Drawings.
 - 5. Edge Profile: Square edge.

2.04 ACCESSORIES

- A. Fasteners and Anchors:
 1. Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
 2. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.
 3. Powder Actuated Anchors: At structural core brick masonry as indicated on Drawings.
- B. Prefabricated Connectors and Hangers: Hot dipped galvanized steel, sized to suit framing conditions.
 1. Specific Products: As indicated on Drawings.
 2. Manufacturers:
 - a. Basis of Design: Simpson Strong-Tie: www.strongtie.com.
 - b. Substitutions: See Section 01 60 00 - Product Requirements.
- C. Glue/Adhesive: Waterproof, water base, air cure type, cartridge dispensed.

2.05 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWWA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
 2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWWA standards.
- B. Fire Retardant Treatment at Exterior Wall Assemblies and as indicated on Drawings:
 1. Exterior Type: AWWA U1, Category UCFB, Commodity Specification H, chemically treated and pressure impregnated; capable of providing a maximum flame spread rating of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes both before and after accelerated weathering test performed in accordance with ASTM D2898.
 - a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
 - b. Treat all exterior rough carpentry items.
- C. Preservative Pressure Treatment of Lumber Above Grade: AWWA U1, Use Category UC3B, Commodity Specification A using waterborne preservative to 0.25 lb/cu ft retention.
 1. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 2. Treat lumber in contact with roofing, flashing, or waterproofing.
 3. Treat lumber in contact with masonry or concrete.

PART 3 EXECUTION**3.01 INSTALLATION - GENERAL**

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.02 FRAMING INSTALLATION

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

3.03 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.

3.04 ROOF EDGE AND WALL COPING NAILERS

- A. Roof Edge: Install treated wood nailers at perimeter of roof areas and perimeter of penetrations:
 - 1. Use multiple layers to achieve height to match thickness of rigid insulation.
 - 2. Secure to metal decking with screws spaced 12 inches on center, staggered 1/3 of nailer width, and installed within 6 inches of each nailer end. Install two screws at each nailer end; install in accordance with Factory Mutual Prevention Data Sheet 1-49.

3.05 INSTALLATION OF CONSTRUCTION PANELS

- A. Subflooring/Underlayment Combination: Glue and nail to framing; staples are not permitted.
- B. Subflooring: Nail to framing; staples are not permitted.
- C. Underlayment: Secure to subflooring with nails .
- D. Roof Sheathing: Secure panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
 - 1. At long edges use sheathing clips where joints occur between roof framing members.
 - 2. Nail panels to framing; staples are not permitted.
- E. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.

3.06 TOLERANCES

- A. Framing Members: 1/4 inch from true position, maximum.
- B. Variation from Plane (Other than Floors): 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

END OF SECTION

FINISH CARPENTRY
SECTION 06 20 00

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and other Conditions and Division 1-General Requirements sections, apply to the work specified in this Section.

1.02 SECTION INCLUDES

- A. Hardware and attachment accessories.

1.03 PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION

- A. Section 08700 - Door Hardware: Supply of hardware and attachment accessories to this Section.

1.04 RELATED SECTIONS

- A. Section 03600 – Grout: Grout for under door thresholds.
- B. Section 06112 - Framing and Sheathing: Installation of blocking for finish carpentry items.
- C. Section 07900 - Joint Sealers: Sealant used at the junction of different materials and joints between exterior soffit boards.
- D. Section 09900 - Painting: Painting and finishing of finish carpentry items.

1.05 REFERENCES

- A. AWI - Quality Standards.
- B. FS MMM-A-130 - Adhesive, Contact.
- C. NEMA LD-3 - High Pressure Decorative Laminates.
- D. PS 20 - American Softwood Lumber Standard.
- E. UL - Underwriters Laboratories.
- F. Painting and Decorating Contractors of America (PDCA) Manual.

1.06 REGULATORY REQUIREMENTS

- A. Conform to applicable code for flame/fuel/smoke requirements.
- B. Conform to UL requirements to achieve fire resistance assembly rating indicated.

1.07 SUBMITTALS

- A. Submit samples under provisions of Section 01300.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 01600.

- B. Store and protect products under provisions of Section 01600.
- C. Store materials in ventilated, interior locations under constant minimum temperatures of 60 degrees F and maximum relative humidity of 55 percent.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

- A. Match existing plywood wall sheathing.

2.02 ACCESSORIES

- A. Nails: Size and type to suit application, galvanized finish.
- B. Grout: Non-shrink as specified under Section 03600 – Grout.
- C. Joint Sealants: As specified under Section 07900 – Joint Sealants.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Insure proper backing is in place to accept the work.
- B. Beginning of installation means acceptance of existing conditions.

3.02 PREPARATION

- A. Before installation, prime paint surfaces with paint on items or assemblies to be in contact with cementitious materials.

3.03 INSTALLATION

- A. Install work in accordance with AWI Custom quality standard.
- B. Set and secure materials and components in place, plumb and level.
- C. Place sealant at the intersection of dissimilar materials.
- D. Installation of thresholds supplied under Section 08700 – Door Hardware: All door thresholds shall be grouted solid with non-shrink grout.

3.04 TOLERANCES

- A. Maximum Variation from True Position: 1/16 inch.
- B. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch.

END OF SECTION

**SECTION 07 21 00
BATT AND BLANKET INSULATION**

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and other Conditions and Division 1-General Requirements sections, apply to the work specified in this Section.

1.02 SECTION INCLUDES

- A. Provide Sound batt insulation for all new interior walls & where lockers removed.

1.03 REFERENCES

- A. FS HH-I-521 - Insulation Blankets, Thermal (Mineral Fiber, for Ambient Temperatures).
- B. FS HH-I-1252 - Insulation Thermal, Reflective (Aluminum Foil).
- C. FS HH-I-1030A - Insulation Loose (glass or mineral).
- D. ASTM C553 – Mineral Fiber Blanket and Felt Insulation (Industrial Type).
- E. ASTM C612 – Mineral Fiber Block and Board Insulation.

1.04 SYSTEM DESCRIPTION

- A. Materials of this Section shall provide sound attenuation at interior elements.

1.05 SUBMITTALS

- A. Submit manufacturer's installation instructions under provisions of Section 01300.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Owens-Corning Fiberglass.
- B. Manville.
- C. Schuller
- D. Substitutions: Under provisions of Section 01600.

SECTION 07 21 00 - BATT AND BLANKET INSULATION

2.02 MATERIALS

- A. Glass or Mineral Fiber Thermal Insulation:
 - 1. Concealed Applications:
 - a. FS HH-I-521; preformed glass or mineral fiber batt; Type I - without membrane for sound insulation.
 - 2. Thickness required for resistance (R) values as shown.

2.03 INSULATION VALUES

- A. Sound and Acoustic Batts: 2 ½ or 3 ½ thick batts to fill wall cavity.

2.04 ACCESSORIES

- A. Tape: Bright aluminum, self adhering type mesh reinforced 2 inches wide.
- B. Screws, Washers, Nails, Staples and Steel Wire: Electroplated; type and size to suit application.

PART 3 EXECUTION

3.01 PREPARATION

- A. Verify adjacent materials are dry and ready to receive installation.
- B. Verify mechanical and electrical services within walls and ceilings have been installed and tested.

3.02 INSTALLATION

- A. Trim insulation neatly to fit spaces. Use batts free of damage.
- B. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within the plane of insulation. Leave no gaps or voids.
- C. Install sound batt insulation with tight fit between studs in all new interior walls as noted on Drawings. Sound batts must fill wall cavity.

END OF SECTION

**JOINT SEALANTS
SECTION 07 90 00**

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and other Conditions and other Division 1 - General Requirements sections, apply to the work specified in this Section.

1.02 SECTION INCLUDES

- A. Preparing sealant substrate surfaces.
- B. Sealant and backing.

1.03 RELATED SECTIONS

- A. Section 06200 - Finish Carpentry: Sealant used at junction of different materials.
- B. Section 08110 – Metal Doors and Frames: Sealants used in conjunction with door frames

1.04 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.
- B. Product data:
 - 1. Materials list of items proposed to be provided under this Section;
 - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements;
 - 3. Shop Drawings or catalog illustrations in sufficient detail to show installation and interface of the work of this Section with the work of adjacent trades;
 - 4. Manufacturer's current recommended installation procedures which, when approved by the Architect, will become the basis for accepting or rejecting actual installation procedures used on the Work.
 - 5. Written documentation of applicator's qualifications, including reference projects of similar scope and complexity, with current phone contacts of architects and owners for verification.
 - 6. Certification from sealant manufacturers that their products are suitable for the use indicated and comply with specification requirements.
 - 7. Report from sealant applicator summarizing results of preconstruction field adhesion testing.

1.05 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen thoroughly trained and experienced in the necessary crafts and completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.

- B. Applicator qualifications:
 - 1. Applicator shall have at least three years experience in installing materials of types specified and shall have successfully completed at least three projects of similar scope and complexity.
 - 2. Applicator shall designate a single individual as project foreman who shall be on site at all times during installation.
- C. Perform work in accord with ASTM C-1193 guidelines except where more stringent requirements are indicated or specified.
- D. Preconstruction compatibility and adhesion testing:
 - 1. Submit to joint sealant manufacturer samples of actual materials that will contact or affect their joint sealants in the Work for compatibility and adhesion testing.
 - 2. This testing will not be required where sealant manufacturer is able to furnish data acceptable to Architect based on previous testing for adhesion and compatibility to materials matching those of the Work.
- E. Preconstruction field adhesion testing:
 - 1. In jobsite field samples prior to general installation, conduct field-tests for adhesion of joint sealants to actual joint substrates using proposed joint preparation methods recommended by manufacturer.
 - 2. Conduct tests for each type of sealant and substrate.
 - 3. Locate field-test joints where inconspicuous or as approved by Architect.
 - 4. Include areas typical of those requiring removal of existing sealants and utilize methods proposed for sealant removal that have been pre-approved by Architect.
 - 5. Test method: Use manufacturer's standard field adhesion test methods and methods proposed for joint preparation to verify proper priming and joint preparation techniques required to obtain optimum adhesion of joint sealants to joint substrate.
 - 6. Evaluate and report results of field adhesion testing.
 - 7. Do not use joint preparation methods or sealants that produce less than satisfactory adhesion to joint substrates during testing.
 - 8. Standard of acceptance: Joints installed during preconstruction field adhesion testing that are accepted by Architect shall be retained as standard of acceptability and incorporated into Work of that area during general installation.
 - 9. At least one such standard of minimum 5 feet in length shall be established for each type of sealant and substrate.
- F. Schedule applications of waterproofing, water repellents and preservative finishes after sealant installation unless sealant manufacturer approves otherwise in writing. Ensure that installed sealant is allowed to cure sufficiently prior to subsequent applications.

1.06 **DELIVERY, STORAGE AND HANDLING**

- A. Deliver the materials to the job site in the manufacturer's unopened containers with all labels intact and legible at time of use.
- B. Store materials in accord with manufacturer's recommendations with proper precautions to ensure fitness of material when installed.
- C. Comply with pertinent provisions of Section 01600.

1.07 SUBSTRATE CONDITIONS

- A. General:
 - 1. Provide joints properly dimensioned to receive the approved sealant system.
 - 2. Provide joint surfaces that are clean, dry, sound and free of voids, deformations, protrusions and contaminants which may inhibit application or performance of the joint sealant.
 - 3. Where expansion joints having preformed joint fillers are scheduled to be sealed, provide a reservoir to accept the sealant such as by a molded breakaway joint cap or a removable block out.

1.08 WARRANTY

- A. Deliver to the Architect signed copies of the following written warranties against adhesive and cohesive failure of the sealant and against infiltration of water and air through the sealed joint for a period of 3 years from date of completion.
 - 1. Manufacturer's standard warranty covering sealant materials;
 - 2. Applicator's standard warranty covering workmanship.

PART 2 PRODUCTS

2.01 GENERAL

- A. Acceptable manufacturer:
 - 1. Tremco/Vulkem by Mameco International, Inc., Cleveland, OH 1-800-321-6412.
 - 2. Sika
 - 3. Precora
- B. Provide all sealants from one manufacturer to insure compatibility.
- C. Compatibility:
 - 1. Provide joint sealants, joint fillers and accessory joint materials that are compatible with one another and with joint substrates under project conditions.
 - 2. Install joint sealants, joint fillers and related joint materials that are nonstaining to visible joint surfaces and surrounding substrate surfaces.
- D. Provide colors selected by Architect from manufacturer's standard color range.

2.02 ELASTOMERIC SEALANTS

- A. Sealant Type A:
 - 1. For exterior joints in vertical surfaces and non-traffic horizontal surfaces such as, but not limited to:
 - a. Control and expansion joints in cast-in-place concrete.
 - b. Joints between architectural precast concrete units.
 - c. Control and expansion joints in unit masonry.
 - d. Metal panel joints.
 - e. Joints between marble or granite.
 - f. Cross joints in all copings and cross joints in all projecting stone work.
 - g. Joints in exterior insulation and finish system.
 - h. Joints between different materials listed above.
 - i. Perimeter joints between materials listed above and frames of doors, windows, storefronts, louvers and similar openings.
 - j. Control and expansion joints in ceiling and overhead surfaces.
 - k. Under metal thresholds and saddles.

- l. Bedding bead for sheet metal flashings and frames of metal or wood.
 - m. Between laps in fabrications of sheet metal.
 - n. Other joints as indicated.
 2. Provide single-component or multi-component, low-modulus, non-sag polyurethane sealant that is suitable for continuous immersion in water; comply with ASTM C920, Type S or M, Grade NS, Class 25.
- B. Sealant Type B:
 1. For interior joints in vertical surfaces and non-traffic horizontal surfaces such as, but not limited to:
 - a. Control and expansion joints on exposed interior surfaces of exterior walls.
 - b. Perimeter joints on exposed interior surfaces of exterior openings.
 - c. Joints on underside of precast beams and planks.
 - d. Perimeter joints between interior wall surfaces and frames of interior doors, windows, storefronts, louvers, elevator entrances and similar openings.
 - e. Trim or finish joints subject to movement.
 - f. Between laps in fabrications of sheet metal.
 - g. Other joints as indicated.
 2. Provide single-component or multi-component, non-sag polyurethane sealant having plus- or-minus 25 percent joint movement capability that is suitable for continuous immersion in water; comply with ASTM C920, Type S or M, Grade NS, Class 25.
- C. Sealant Type C:
 1. For exterior and interior joints in horizontal and sloped traffic surfaces such as, but not limited to:
 - a. Control, expansion and isolation joints in cast-in-place concrete.
 - b. Control, expansion and isolation joints in structural precast concrete units.
 - c. Joints between architectural precast concrete paving units.
 - d. Tile control and expansion joints.
 - e. Joints between different materials listed above.
 - f. Other joints as indicated.
 2. Provide single-component or multi-component polyurethane sealant having a Shore A hardness of not less than 25 or more than 50 and plus-or-minus 25 percent joint movement capability that is suitable for continuous immersion in water; comply with ASTM C920, Type S or M, Grade P or NS, Class 25.
- D. Sealant Type D:
 1. For exterior and interior joints in vertical surfaces and non-traffic horizontal surfaces requiring a virtually odor free sealant.
 2. Provide single-component, no vapor, low-modulus, 100 percent solids polyurethane sealant that is suitable for continuous immersion in water; comply with ASTM C920, Type S, Grade NS, Class 25.
 3. Provide sealant comperable to Vulkem 921; Mameco International, Inc.
- E. Sealant Type E:
 1. For exterior and interior joints in horizontal and sloped surfaces up to 6 percent requiring a virtually odor free sealant.
 2. Provide single-component, no vapor, low-modulus, 100 percent solids polyurethane sealant that is suitable for continuous immersion in water. ASTM C920, Type S, Grade P, Class 25.
 3. Provide sealant comperable Vulkem 300SSL; Mameco International, Inc.

- F. Sealant Type F:
 - 1. For interior joints in vertical and horizontal surfaces requiring pick-resistant security sealant such as, but not limited to:
 - a. Control and expansion joints on exposed interior surfaces of exterior walls.
 - b. Perimeter joints on exposed interior surfaces of exterior openings.
 - c. Perimeter joints between concrete surfaces and frames of interior doors, windows and elevator entrances.
 - d. Trim or finish joints subject to minimal movement.
 - e. Other joints as indicated.
 - 2. Provide single-component or multi-component, non-sag polyurethane sealant having a Shore A hardness of 55 minimum.
 - 3. Provide sealant comperable to Vulkem 617; Mameco International, Inc.

- G. Sealant Type G:
 - 1. For applications at acoustical walls in exposed locations around doors, windows and concealed spaces at the intersection of a continuous metal track and concrete floor
 - 2. Acoustical Butyl Rubber Calking, ASTM C919, Non-sag, one component
 - 3. Provide sealant comperable to USG Acoustical Sealant as manufactured by U.S. Gypsum.

- H. Sealant Type H:
 - 1. For applications in concealed spaces, such as under continuous metal track and concrete floor.
 - 2. Acoustical Tape Sealant: Medium density Polyvinyl chloride Foam Tape Sealants: SST 15, Sealant Specialist Tape by Tremco.

- I. Sealant Type I:
 - 1. For applications such as under thresholds.
 - 2. Calking: US. TT-S-001657, Type I, with +/- 5 percent joint movement range, single componant.

2.03 ACCESSORIES

- A. Joint cleaner: Cleaner as recommended by sealant manufacturer for substrates indicated.
- B. Joint primer: As recommended by sealant manufacturer for substrates, conditions and exposures indicated.
- C. Bond breaker: Polyethylene tape or other adhesive faced tape as recommended by sealant manufacturer to prevent sealant contact where it would be detrimental to sealant performance.
- D. Joint backer: Polyethylene foam rod or other compatible non-waxing, non-extruding, non-staining resilient material in dimension 25 percent to 50 percent wider than joint width as recommended by sealant manufacturer for conditions and exposures indicated.
- E. Masking tape: Non-staining, non-absorbent tape product compatible with joint sealants and adjacent joint surfaces that is suitable for masking.
- F. Sand: Masons sand matching that used in Section 04320.

2.04 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor and approved by the sealant manufacturer as compatible, subject to the approval of the Architect.

JOINT SEALANTS - SECTION 07 90 00

PART 3 EXECUTION

3.01 SURFACE CONDITIONS

- A. Coordinate as required with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section.
- B. Applicator shall examine the areas and conditions under which work of this Section will be performed.
 - 1. Verify conformance with manufacturer's requirements;
 - 2. Report unsatisfactory conditions in writing to the Architect;
 - 3. Do not proceed until unsatisfactory conditions are corrected.

3.02 PREPARATION

- A. Prepare surfaces to receive sealants in accord with sealant manufacturer's instructions and recommendations except where more stringent requirements are indicated.
- B. Thoroughly clean joint surfaces using cleaners approved by sealant manufacturer whether primers are required or not.
 - 1. Remove all traces of previous sealant and joint backer by mechanical methods, such as by cutting, grinding and wire brushing, in manner not damaging to surrounding surfaces.
 - 2. Remove paints from joint surfaces except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer.
 - 3. Remove wax, oil, grease, dirt film residues, temporary protective coatings and other residues by wiping with cleaner recommended for that purpose. Use clean, white, lint-free cloths and change cloths frequently.
 - 4. Remove dust by blowing clean with oil-free, compressed air.
- C. Provide joint backer material uniformly to depth required by sealant manufacturer for proper joint design using a blunt instrument.
 - 1. Fit securely by compressing backer material 25 percent to 50 percent so no displacement occurs during tooling.
 - 2. Avoid stretching or twisting joint backer.
- D. Provide bond-breaker where indicated or recommended by sealant manufacturer, adhering strictly to the manufacturers installation requirements.
- E. Prime joint substrates where required.
 - 1. Use and apply primer according to sealant manufacturers recommendations.
 - 2. Confine primers to sealant bond surfaces; do not allow spillage or migration onto adjoining surfaces.
- F. Taping:
 - 1. Use masking tape where required to prevent sealant or primer contact with adjoining surfaces that would be permanently stained or otherwise damaged by such contact or the cleaning methods required for removal.
 - 2. Apply tape so as not to shift readily and remove tape immediately after tooling without disturbing joint seal.

3.03 INSTALLATION

- A. Provide the approved sealant system where shown on the Drawings, and in strict accord with the manufacturer's recommendations as approved by the Architect.
- B. Install sealants immediately after joint preparation.
- C. Mix and apply multi-component sealants in accord with manufacturer's printed instructions.
- D. Install sealants to fill joints completely from the back, without voids or entrapped air, using proven techniques, proper nozzles and sufficient force that result in sealants directly contacting and fully wetting joint surfaces.
- E. Install sealants to uniform cross-sectional shapes with depths relative to joint widths that allow optimum sealant movement capability as recommended by sealant manufacturer.
- F. Tool sealants in manner that forces sealant against back of joint, ensures firm, full contact at joint interfaces and leaves a finish that is smooth, uniform and free of ridges, wrinkles, sags, air pockets and embedded impurities.
 - 1. Dry tooling is preferred; tooling liquids that are non-staining, non-damaging to adjacent surfaces and approved by sealant manufacturer may be used if necessary when care is taken to ensure that the liquid does not contact joint surfaces before the sealant.
 - 2. Provide concave tooled joints unless otherwise indicated to provide flush tooling or recessed tooling.
 - 3. Provide recessed tooled joints where the outer face of substrate is irregular.
- G. Remove sealant from adjacent surfaces in accord with sealant and substrate manufacturer recommendations as work progresses.
- H. "Sand" joints in masonry to match appearance of mortar joints.
- I. Protect joint sealants from contact with contaminating substances and from damages. Cut out, remove and replace contaminated or damaged sealants, immediately, so that they are without contamination or damage at time of substantial completion.

END OF SECTION

HOLLOW METAL DOORS AND FRAMES
SECTION 08 11 00

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and other Conditions and other Division 1 - General Requirements sections, apply to the work specified in this Section.

1.02 SECTION INCLUDES

- A. Non-rated rolled steel doors, frames and relites.

1.03 RELATED SECTIONS

- A. Section 03600 - Grout: Grout for frames.
- B. Section 04300 - Unit Masonry: Installation of frame anchors .
- C. Section 07900 - Joint Sealers: Sealant materials and methods of installation.
- D. Section 08000 - Door Schedule.
- E. Section 08700 - Door Hardware: Door hardware for swinging doors and manufacturer's template's for door fabrication.
- F. Section 09900 - Painting: Field painting of doors, frames and vision panels.

1.04 SUBMITTALS

- A. Product Data:
 - 1. Submit product information on doors and frames under provisions of Section 01300.
 - 2. Indicate door core, frame profile, frame corner detail, hardware preparations, and details of glazing, and door edges.
 - 3. Indicate factory prime finish.
 - 4. Submit manufacturer's installation instructions for "S" labeled doors. A copy shall be sent to the Architect and a copy shall be kept at the jobsite.
- B. Shop Drawings:
 - 1. Submit shop drawings of door and frame work under provisions of Section 01300.
 - 2. Include door schedule which indicates door, frame, and glazed opening size, and door core materials.
 - 3. Indicate profile and anchorage of glazing stops.
 - 4. Indicate door and frame assembly fire rating and sound rating.
 - 5. Indicate any conflicts between specifications, templates, door and frame fabrication.
- C. Templates: Submit letter to Architect certifying that Hardware Templates, from supplier of Door Hardware – Section 08700, have been received and reviewed prior to fabrication of doors and frames.

HOLLOW METAL DOORS AND FRAMES - SECTION 08 11 00

1.05 REFERENCES

- A. DHI - Door Hardware Institute: The Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames and Builder's Hardware.
- B. ADAAG - Americans with Disabilities Act Accessibility Guidelines.
- C. NFPA 80 - Fire Doors and Windows.
- D. SDI-100 - Standard Steel Doors and Frames.
- E. SDI-105 - Recommended Erection Instructions for Steel Frames.
- F. ASTM A525 – General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot Dip Process.
- G. ASTM A526 - General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot Dip Process, Commercial Quality.
- H. ASTM A642 – Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Drawing Quality, Special Killed.
- I. ASTM E283 Air Infiltration.
- J. ANSI 224.1 - Modified Epoxy

1.06 QUALITY ASSURANCE

- A. Conform to requirements of SDI-100.

1.07 REGULATORY REQUIREMENTS

- A. Conform to applicable code for fire rated frames.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturers:
 - 1. Amweld
 - 2. Ceco
 - 3. Curries
 - 4. Deansteel
 - 5. Flemming
 - 6. Republic
 - 7. Steelcraft
 - 8. Stiles Hollow Metal
- B. Substitute Manufacturers:
 - 1. Comply with requirements in Section 01600, Material and Equipment.

HOLLOW METAL DOORS AND FRAMES - SECTION 08 11 00

2.02 HOLLOW METAL DOOR FABRICATION

- A. Fabrication of Standard HM Doors:
1. Industry Standard: ANSI/SDI 100, Grade II, Model 2, seamless.
 2. Door Face Sheets: Minimum 16 gage galvanized steel.
 3. Door Edges: Seamless, continuous welded and ground smooth seam.
 4. Door Top End Closure: Flush with steel channel, Tack weld in place, seams filled flush to prevent water penetration..
 5. Core: Steel stiffeners at 6 inches on center with fiberglass7 insulation.
 6. Door Thickness: 1-3/4 inches.
 7. Finish:
 - a. Base metal: A60 galvanized finish
 - b. Primer: Manufacturer's standard polyamide epoxy primer, containing minimum 57 percent solids by volume. Comparable to Tnemec's N27 Typoxy.
 - c. Application Rate: 3 to 4 mils, dry film thickness.
 - d. Primer must be compatible with Industrial coating as specified in Section 09900.

2.03 FRAME FABRICATION

- A. Fabrication of HM Door Frames:
1. Industry Standard: ANSI/SDI 100.
 2. Frame Metal: 14 gage galvanized steel.
 3. Frame Corners: Fully welded, all joints and corners shall have contact edges closed tight and mitered. Provide watertight unit.
 4. Frame Dimensions: 2 inch face or 4 inch face at masonry openings, 5/8 inch integral stop, double rabbet with frame depth as shown on drawings.
 5. Finish:
 - a. Base metal: A60 galvanized finish
 - b. Primer: Manufacturer's standard polyamide epoxy primer, containing minimum 57 percent solids by volume. Comparable to Tnemec's N27 Typoxy.
 - c. Application Rate: 3 to 4 mils, dry film thickness.
 - d. Primer must be compatible with Industrial coating as specified in Section 09900.
 6. Fire Label: Furnish frames with fire label as indicated in door schedule and on Drawings.
 7. Glass stops: Prepare window frame to receive glass stops on interior side of frame at exterior window.

2.04 HARDWARE PREPARATION

- A. Hardware Preparation:
1. Prepare doors and frames to receive door hardware, including cutouts, reinforcing, drilling, and tapping.
 2. Reinforce door frames with 3/16 inch by full width by 11 inch long steel plate reinforcing welded to frame at hinge pockets, removable mullion heads, and closers.
 3. Reinforce doors with 3/16 inch solid stock steel plate reinforcing welded to door at closer, lock, exit device, pull handle, holder, and stop mounting locations, extending 2 inches beyond hardware in each direction. Refer to manufacturer's template for recommended reinforcing locations.
 4. Prepare non-sound rated single interior door frames to receive three silencers on strike jambs. Silencers provided by hardware supplier under Section 08700.
 5. Prepare non-sound rated interior door frames for pairs of doors to receive four equally spaced silencers on head. Silencers provided by hardware supplier under Section 08700.
 6. Furnish frames with 8 jamb anchors and 2 floor anchors, weld floor anchors to frame.

HOLLOW METAL DOORS AND FRAMES - SECTION 08 11 00

7. Prepare doors to receive hardware in compliance with ANSI A 115 and ADAAG guidelines.

HOLLOW METAL DOORS AND FRAMES - SECTION 08 11 00

PART 3 EXECUTION

3.01 INSTALLATION

- A. Installation of Door Frames:
 - 1. Install steel frames and anchor frames to wall and floor in accordance with manufacturer's instructions.
 - 2. Apply 1/16 inch thick bituminous coating on inside of frame at all exterior door and window frames.
 - 3. Attach jamb anchors to adjacent walls as indicated in manufacturer's standard details.
 - 4. Fill all exterior frames and selected interior frames with cement grout as indicated on drawings.
 - 5. Cover hardware openings in frames to prevent cement grout from entering the hardware recess.
 - 6. Install frames to plus or minus 1/16 inch for squareness, alignment, twist, and plumbness.
 - 7. Install glazing as scheduled.
 - 8. Seal joints of dissimilar materials with sealant as specified under Section 07900.

- B. Installation of Doors:
 - 1. Fit doors to frame providing clearances required by SDI 100.
 - 2. Install door and frame hardware after site finishing doors and frames.
 - 3. Install glazing as scheduled.

3.02 COMPLETION

- A. Adjusting Defective Work:
 - 1. Adjust clearances and hardware placement for smooth door operation.
 - 2. Touch up scratched exterior doors and frames with Tnemec-Zinc at 2.5 to 3.0 mils dry film thickness.

- B. Final Cleaning:
 - 1. Clean door, hardware, and frame surfaces prior to Substantial Completion.

END OF SECTION

DOOR HARDWARE
SECTION 08 70 00

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and other Conditions and Division 1 - General Requirements sections, apply to the work specified in this Section.

1.02 SECTION INCLUDES

- A. Hardware for wood and hollow steel doors.
- B. Thresholds.
- C. Gasketing.
- D. Hardware as scheduled on Drawings and end of this Section.
- E. Furnish templates to Section 08110, 08210, 08380 and 08410 for door and frame preparation.

1.03 RELATED SECTIONS

- A. Section 06200 - Finish Carpentry: Installation of hardware.
- B. Section 08110 - Steel Doors and Frames: Hardware for doors.
- C. Section 08210 - Wood Doors: Hardware for doors.
- D. Section 16010 - Basic Electrical Requirements.
- E. Section 16721 - Fire Alarm System.

1.04 REFERENCES

- A. Americans with Disability Act Accessibility Guidelines(ADAAG) Federal Register - Rules and Regulations.
- B. ANSI/NFPA 80 - Fire Doors and Windows.
- C. DHI - Door and Hardware Institute.

1.05 COORDINATION

- A. Coordinate work of this Section with other directly affected Sections involving manufacturer of any internal reinforcement for door hardware.
- B. Wiring, junction boxes, conduit, etc., for electrically controlled and/or monitored hardware are to be provided by other sections of this specification. Coordinate voltages, conductor requirements, etc. with the affected sections.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
 - 1. Obtain each type of hardware from only one manufacturer, except where indicated otherwise in hardware schedule.
- B. Supplier Qualifications:
 - 1. Hardware supplier shall have furnished hardware in the same market area as the project for a period of not less than 2 years.
 - 2. Hardware supplier shall have in his employment an experienced Architectural Hardware Consultant (AHC) who is available for project hardware consultation to the Owner, Architect, and Contractor.
 - 3. Hardware supplier shall review and approve Hardware Installer qualifications.
- C. Installer Qualifications: Company shall have a minimum of 2 years experience in the installation of commercial grade hardware.
- D. Fire Door Labels:
 - 1. Provide hardware for fire-rated openings in compliance with American Insurance Association, NBFU Pamphlet No. 80 and NFPA Standard No. 80.
 - 2. Provide hardware which has been tested and listed by an independent testing laboratory for the types and sizes of doors required, and complies with requirements for door assembly labels.
 - 3. Where panic exit devices are required for fire-rated doors, provide fire label on exit device indicating "Fire Exit Hardware."
- E. Keying Meeting:
 - 1. Upon receipt of final hardware schedules, hardware supplier shall request Contractor to arrange a keying meeting between hardware supplier and Owner's Representative.
 - 2. From information obtained at this keying meeting, submit 3 copies of detailed keying schedule.

1.07 REGULATORY REQUIREMENTS

- A. Conform to NFPA Standard No. 80 and applicable codes for requirements applicable to fire rated doors and frames. Hardware applied to doors with U.L. labels shall comply with requirements of that label.
- B. Conform to the requirements of ADAAG for making buildings accessible to and usable by physically handicapped occupants.

1.08 RESPONSIBILITY

- A. The types listed are to be used as a guide for quality and operation and are not to be construed as a complete list. The detailing of the hardware requirements shall be the responsibility of this Contractor.

1.09 SUBMITTALS

- A. Submit schedule, shop drawings, and product data under provisions of Section 01300.
- B. Indicate locations and mounting heights of each type of hardware.
- C. List each opening, door size, door hand, door and frame material, door label, manufacturer's number and finish.
- D. Provide edited product data cut sheets on specified hardware. Clearly identify hardware items represented within submittal. Submittals containing complete product line catalogues will be rejected.

1.10 OPERATION AND MAINTENANCE DATA

- A. Submit operation and maintenance data under provisions of Section 01700.
- B. Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

1.11 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 01600.
- B. Store and protect products under provisions of Section 01600.
- C. Package hardware items individually; label and identify package with door opening code to match hardware schedule.
- D. Protect hardware by storing in secure area.

1.12 WARRANTY

- A. Provide one year warranty under provisions of Section 01700.

1.13 MAINTENANCE MATERIALS

- A. Provide special wrenches and tools applicable to each different or special hardware component.
- B. Provide maintenance tools and accessories supplied by hardware component manufacturer.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Butts:
 - 1. Ives.
 - 2. McKinney. *(MCK)
 - 3. Stanley.

- B. Latchset, Locksets:
 - 1. Schlage. *(SCH)

- C. Cylinders:
 - 1. Exterior and Interior: Match Owner's Existing Key System.

- D. Occupancy Indicators:
 - 1. Schlage *(SCH)

- E. Surface Closers:
 - 1. LCN – 4111DA Series.*(LCN)

- F. Exit Devices and Mullions:
 - 1. Von Duprin

- G. Stops and Holders:
 - 1. Builders Brass Works.
 - 2. Glynn-Johnson.
 - 3. Ives.*(IVE)
 - 4. Quality.
 - 5. Hagar

- H. Push and Pull Plates:
 - 1. Builders Brass Works.
 - 2. Trimco.
 - 3. Tice.*(TIC)
 - 4. Quality.
 - 5. Hagar.

- I. Thresholds, Gaskets, and Weatherstripping:
 - 1. National Guard.
 - 2. Pemko.*(PEM)
 - 3. Reese.

- J. Astragals:
 - 1. Pemko.*(PEM)
 - 2. Reese.
 - 3. National Guard

- K. Overhead Stops and Holders:
 - 1. Glynn-Johnson.
 - 2. Rixson.*(RIX)

- L. Flush Bolts, Dust Proof Strikes, and Coordinators:
 - 1. Glynn Johnson.
 - 2. Door Controls International.*(DCI)

- M. Silencers:
 - 1. Builders Brass Works.
 - 2. Glynn Johnson.
 - 3. Ives.*(IVE)

- N. Other Manufacturers:
 - 1. Submit substitution requests prior to Bid Date.
 - 2. Comply with requirements in Section 01600, Material and Equipment.

* Manufacturers specified in hardware schedule at end of this Section.

2.02 LOCKSET/LATCHSET DESIGN

- A. Design: Rhodes, except where listed otherwise.
- B. Strikes to have extended lip strike where required to protect trim, ANSI prep.
- C. All locks to have 2 3/4 inch backset.

2.03 KEYING

- A. Provide temporary construction cores for locks, as required by contractor, keyed alike. Supply twenty (20) keys for use by Contractor & Owner.
- B. Permanent Door Locks: Designed to allow keying by owner. Master keyed and Grand master keyed to Owner's existing keying system.
- C. Owner will supply all final keys.
- D. Mark all Construction keys "DO NOT DUPLICATE". Do not stamp keys with door number or bitting. Serially number all keys in accordance with Owner's instructions.

2.04 FASTENINGS

- A. Furnish hardware with all necessary screws, bolts and other fastenings of suitable size and type to securely anchor in position and harmonize with hardware material and finish.

2.05 FINISHES

- A. Finishes are identified in the schedule at the end of this section.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Installation of Recessed Door Hardware:
 - 1. Install recessed hardware, then remove and store recessed hardware in a secure place during application of door and frame finish.
 - 2. After finishing doors and frames, reinstall recessed hardware.
- B. Installation of Surface Mounted Door Hardware:
 - 1. Anchor kick plates with oval-head full-thread screws, spaced uniformly at a maximum of 5 inches on center at kick plate perimeter.
 - 2. Anchor thresholds with a positive anchoring device or expansion shield and anchor bolts.
 - 3. Set thresholds in full bed of grout, refer to Section 03600 - Grout.
- C. Install cylinders in cabinet locks provided under Section 06410 – Custom Casework.

3.02 COMPLETION

- A. Operating Hardware Adjustments:
 - 1. Check and adjust operating hardware and each door operation to ensure smooth operation.
 - 2. Lubricate moving parts with type of lubrication recommended by manufacturer.
 - 3. Use graphite or WD 40 if no other lubrication is recommended.
 - 4. Replace hardware which cannot be adjusted and lubricated to operate correctly.
 - 5. Adjust door closers to required opening force and closing speeds, per ADAAG. Door closing speed shall be consistent through-out the building. Properly adjust backcheck on closers per manufacturer's recommendations.
- B. Contract Closeout Adjustments:

DOOR HARDWARE - SECTION 08 70 00

1. Where hardware installation is made more than one month prior to occupancy of a space or area, return to the work not more than 7 days prior to occupancy, and make a final check and adjustment of door hardware.
- C. Re-adjust and inspect hardware for opening force and closing speeds, per requirements of ADAAG, after final system balancing of Mechanical Systems.

3.03 HARDWARE SCHEDULE

- A. Required Door Hardware:
 1. Furnish the following hardware groups for each door as indicated on the Door Schedule, and as required for a complete installation.
 2. Include items listed and required for a complete installation regardless of omissions or conflicts in Contract Documents.

3.04 SCHEDULE

- A. Provide hardware as shown per schedule on Contract Documents Sht. A9.1.

END OF SECTION

**SECTION 09 65 00
RESILIENT FLOOR BASE**

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and other Conditions and Division 1 - General Requirements sections, apply to the work specified in this Section.

1.02 SECTION INCLUDES

- A. Resilient Base.
- B. Accessories.

1.03 RELATED SECTIONS

- A. Section 01400 – Quality Control: Testing of slabs for content of moisture and alkalinity.

1.04 REFERENCES

- A. ASTM E84 - Surface Burning Characteristics of Building Materials.
- B. FS SS-W-40 - Wall Base: Rubber.
- C. Meet Requirements of Resilient Floor Covering Institute.

1.05 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Samples:
 - 1. Submit two box samples or chain sets for each floor material specified.
 - 2. Submit two chain sets of base color for color selection specified by Architect.
- C. Product Data: Submit manufacturer's product literature and installation instructions.

1.06 QUALITY ASSURANCE

- A. Manufacturer: Provide each type of resilient flooring product as produced by a single manufacturer, including recommended primers, adhesives, sealants, edge strips and other accessories as required.
- B. Subcontractor: Subcontract the Work of this Section to a firm specializing in resilient flooring Work, which is acceptable to the manufacturers of the products involved, and which can demonstrate at least 5 years prior experience in successful installations similar to the Work required herein.

1.07 REGULATORY REQUIREMENTS

- A. Conform to applicable code for flame/fuel/smoke rating requirements in accordance with ASTM E84.

1.08 OPERATION AND MAINTENANCE DATA

SECTION 09 65 00 - RESILIENT FLOOR BASE

- A. Submit cleaning and maintenance data under provisions of Section 01300.
- B. Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

1.09 ENVIRONMENTAL REQUIREMENTS

- A. Store materials for three days prior to installation in area of installation to achieve temperature stability.
- B. Maintain ambient temperature required by adhesive manufacturer three days prior to, during, and 24 hours after installation of materials.

PART 2 PRODUCTS

2.01 BASE

- A. Manufacturers:
 - 1. "Wallflowers" by Flexco Company.
 - 2. "RubberMyte" by Mercer Products Co., Inc.
 - 3. "Infinity" by Roppe.
 - 4. "Color Integrated Wall Base" by Armstrong.
 - 5. Substitutions: Under provisions of Section 01600.
- B. Rubber Base Materials: ASTM F1861 – Type TS, Thermoset Vulcanized Rubber; continuous, 6 inch high; 1/8 inch thick; top set coved. Color Black.
- C. Rubber Base Accessories: Preformed corners supplied by same manufacturer as the base. Coordinate height with height of base.

2.02 ACCESSORIES

- A. Primers and Adhesives: Healthguard thin-spread adhesive by W.F. Taylor; to suit material and substrate conditions.
- B. Integral Cove backing strip: As recommended by Manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are smooth and flat with maximum variation of 1/8 inch in 10 ft, and are ready to receive Work.
- B. Verify compatibility of resilient base adhesive to substrate.
- C. Beginning of installation means acceptance of existing substrate and site conditions.

3.02 PREPARATION

- A. Prepare the substrate according to the material manufacturer's installation instructions. Remove wall ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with wall filler.

SECTION 09 65 00 - RESILIENT FLOOR BASE

- B. Apply, trowel, and float filler to leave a smooth, flat, hard surface.
- C. Apply primer to substrate surfaces in accordance with manufacturer's recommendations.

3.03 INSTALLATION - BASE

- A. Determine height of base and locations scheduled from mandatory walk-thru.
- B. Fit joints tight and vertical. Maintain minimum measurement of 18 inches between joints. Install as long lengths as practicable.
- C. Scribe and fit internal corners.
- D. Install base on solid backing. Bond tight to wall surfaces. Glue is to be hand-applied without the use of a caulking gun to all permanent fixtures in room to receive base. Pre-formed outside corners are to be used on installation of rubber base and secured with DAP D-15 adhesive.
- E. Scribe and fit to door frames and other interruptions.

3.04 CLEANING

- A. Remove excess adhesive from base, and wall surfaces without damage.

END OF SECTION

PAINTING
SECTION 09 90 00

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and other Conditions and Division 1 - General Requirements sections, apply to the work specified in this Section.

1.02 SECTION INCLUDES

- A. Surface preparation.
- B. Surface finish schedule.

1.03 RELATED SECTIONS

- A. Section 01500 - Construction Facilities and Temporary Controls: Temporary heating and lighting.
- B. Section 03201 - Concrete: Slabs on grade and concrete walls.
- C. Section 05500 - Metal Fabrications: Miscellaneous steel items.
- D. Section 07900 – Joint Sealants: Sealants used in conjunction with preparation of painted surface.
- E. Section 08110 - Steel Doors and Frames: Shop primed items.

1.04 REFERENCES

- A. ASTM D2016 - Test Method for Moisture Content of Wood.
- B. Steel Structures Painting Council (SSPC) Manual.
- C. Painting and Decorating Contractors of America (PDCA) Manual.
- D. Painting and Decorating Contractors of America (PDCA) Standard P3 for designation of Paint Colors.

1.05 DEFINITIONS

- A. Conform to ASTM D16 for interpretation of terms used in this Section.

1.06 QUALITY ASSURANCE

- A. Applicator: Company specializing in commercial painting special coatings and finishing with five years' experience.
- B. Conform to recommendations of the PDCA and SSPC manuals.

1.07 REGULATORY REQUIREMENTS

- A. Conform to applicable code for flame/fuel/smoke rating requirements for finishes.
- B. Coatings must comply with Oregon State Department of Environmental Quality "VOC Area Source" Rules.

1.08 SUBMITTALS

- A. Submit product data under provisions of Section 01300.
- B. Provide product data for each step or process described in 09900, Part 3 - Schedule: Exterior Surfaces.
- C. Submit samples under provisions of Section 01300.
- D. Submit two "draw downs" 8 x 8 inch in size for each color and finishing product scheduled, for Architects approval. Do no work until submittals have been reviewed and approved.
- E. Submit manufacturer's application instructions under provisions of Section 01300.
- F. Submit finish samples of all wood products, finished under this section. Obtain samples of wood products from Section 06200 – Finish Carpentry.

1.09 FIELD SAMPLES

- A. Locate where directed by Architect.
- B. Accepted sample will demonstrate minimum standard for work, and may remain as part of the Work.
- C. Simulate finished lighting conditions for review of field samples.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 01600.
- B. Store and protect products under provisions of Section 01600.
- C. Deliver products to site in sealed and labeled containers; inspect to verify acceptance.
- D. Container labeling to include manufacturer's name, type of paint, brand name, manufacturer's batch number, brand code, coverage, surface preparation, drying time, cleanup, color designation, and instructions for mixing and reducing.
- E. Store paint materials at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in well ventilated area, unless required otherwise by manufacturer's instructions.
- F. Take precautionary measures to prevent fire hazards and spontaneous combustion.
- G. Confine the storage of paints and allied materials to a space particularly assigned, and keep such space neat and clean at all times.
- H. Open containers only as needed, and keep partially filled containers tightly closed when not in use.

1.11 ENVIRONMENTAL REQUIREMENTS

- A. Provide continuous ventilation and heating facilities to maintain surface and ambient temperatures above 45 degrees Fahrenheit for 24 hours before, during, and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.
- B. Do not apply exterior coatings during rain or snow, or when relative humidity is above 85 percent, or to damaged or wet surfaces unless required otherwise by manufacturer's instructions.
- C. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees Fahrenheit for exterior; unless required otherwise by manufacturer's instructions.
- D. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

1.12 COLORS

- A. Colors of paint shall match approved control sample.
- B. Provide matching color & sheen as existing walls & ceilings.

1.13 EXTRA STOCK

- A. Provide one gallon in unopened, original container of each color and surface texture to Owner, minimum.
- B. Label each container with color, color mix formula, texture and room locations, in addition to the manufacturer's label.

PART 2 PRODUCTS

2.01 GENERAL

- A. Products for each general purpose must be of same manufacturer.
- B. Do not use products of different manufacturers over one another, except for shop prime coats specified in other Sections.

2.02 ACCEPTABLE MANUFACTURERS - PAINT

- A. Benjamin Moore.
- B. ICI / Fuller O'Brien.
- C. Kelly Moore.
- D. Miller Paint.
- E. Parker Paint
- F. Rodda Paint Co.
- G. Sherwin Williams.

H. PPG

I. Substitutions: Under provisions of Section 01600.

2.03 ACCEPTABLE MANUFACTURERS – INDUSTRIAL GRADE COATINGS

A. Tnemec

B. Amneron

C. Carboline

D. DeVoe Coatings

E. Pittsburgh Paints, Industrial Maintenance High Performance Coatings.

F. Substitutions: Under provisions of Section 01600.

2.04 MATERIALS

A. Provide the best quality grade of the various types of coatings as regularly manufactured by approved paint materials manufacturers.

B. Coatings:

1. Ready mixed, except field catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
2. Good flow and brushing properties; capable of drying or curing free of streaks or sags.

C. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.

PART 3 EXECUTION

3.01 INSPECTION

A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

C. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:

1. Gypsum Wallboard: 12 percent.
2. Interior Located Wood: 15 percent, measure in accordance with ASTM D2016.

D. Beginning of installation means acceptance of existing surfaces.

3.02 MATERIALS TO BE FINISHED

- A. The following receives **no** finish except as indicated:
 - 1. Metals such as: Brass, bronze, copper, plated metals, stainless steel.
 - 2. Plastic laminate surfacing.
 - 3. Glass, unless otherwise noted.
 - 4. Materials having complete factory finish, such as electrical switch plates, lighting fixtures, finish hardware, and the like.
- B. All other surfaces are to be finished except as listed above or otherwise scheduled or noted.

3.03 PREPARATION

- A. Previously painted galvanized and primed steel surfaces: Remove rust and prepare surfaces in accordance with PCDA Manual. Feather edges of existing paint and prime surfaces with compatible primer.
- B. Remove electrical plates, hardware, light fixture trim, and fittings prior to preparing surfaces or finishing.
- C. Correct minor defects and clean surfaces which affect work of this Section.
- D. Shellac and seal marks which may bleed through surface finishes.
- E. Galvanized Surfaces: Prepare in accordance with SSPC-SP1 Solvent cleaning.
- F. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- G. Uncoated Steel and Iron Surfaces: Prepare in accordance with SSPC-SP3 Power tool cleaning.
- H. Shop Primed Steel Surfaces: Prepare in accordance with SSPC-SP2 or SP3 Hand tool cleaning. Feather edges to make touch-up patches inconspicuous. Clean surfaces in accordance with SSPC-SP1 Solvent Cleaning. Prime bare steel surfaces.
- I. Metal Doors: Seal top and bottom edges with primer.
- J. Joint Sealants: Seal all exposed joints of dissimilar materials with Sealant as recommended by paint manufacturer and as outlined under Section 07900 – Joint Sealants.

3.04 PROTECTION

- A. Protect elements surrounding the work of this Section from damage or disfiguration.
- B. Repair damage to other surfaces caused by work of this Section.
- C. Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring other surfaces.
- D. Remove empty paint containers from site.

3.05 MIXING AND TINTING

- A. Deliver paints and enamels ready-mixed to jobsite.
- B. Job-mix and job-tint only when acceptable to Architect.
- C. Mix only in clean, rust resistant containers.
- D. Use tinting colors recommended by manufacturer for specific type of finish.

3.06 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry.
- C. Apply each coat to uniform finish.
- D. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.
- E. Sand lightly between coats to achieve required finish.
- F. Allow applied coat to dry before next coat is applied.
- G. Prime back surfaces and edges of interior woodwork with primer paint according to type of scheduled finish.
- H. Adequately ventilate areas following manufacturer's recommendations. Utilize forced ventilation if necessary.

3.07 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Refer to appropriate Sections in Division 15 and 16 for schedule of color coding and identification banding of equipment, ductwork, piping, and conduit.
- B. Paint shop primed equipment.
- C. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- D. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, and except where items are prefinished.
- E. Replace identification markings on mechanical or electrical equipment when painted accidentally.
- F. Paint exposed conduit and electrical equipment occurring in finished areas.
- G. Paint both sides and edges of plywood backboards for electrical before installing equipment.
- H. Replace electrical plates, hardware, light fixture trim, and fittings removed prior to finishing.

3.08 CLEANING

- A. As Work proceeds, promptly remove paint where spilled, splashed, or spattered.
- B. During progress of Work maintain premises free of unnecessary accumulation of tools, equipment, surplus materials, and debris.
- C. Collect waste, cloths, and material which may constitute a fire hazard, place in closed metal containers and remove daily from site.

3.09 SCHEDULE - INTERIOR

- A. Gypsum Board & plywood panels: Provide the following finish systems over interior gypsum board and plywood panel surfaces as well as wood trim: (Match existing adjacent surfaces.)
 - 1. Semigloss, Water-Based Epoxy (EP) for the new plywood walls: 2 finish coats over a primer.
 - a. Primer: Latex-based, interior primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.4 mils.
 - 1) Coronado: SuperKote 5000 Latex Primer Sealer 40-11.
 - 2) GP: None Required.
 - 3) Kelly: Sierra Performance S30 Griptec Sandable Primer.
 - 4) Miller: 6020 Premium High Solids PVA Wall Sealer.
 - 5) Moore: SuperSpec Interior Primer Sealer Undercoater 253.
 - 6) Parker: UltraTech C152 Latex Primer/Sealer.
 - 7) PPG: Speedhide Interior Latex Primer Sealer 6-2.
 - 8) Rodda: Heavy Body Scotseal 507801.
 - 9) S-W: Contractors Interior Latex Primer B28WF0162.
 - b. First and Second Coats: Odorless, semigloss, interior water-based epoxy enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 3 mils.
 - 1) Coronado: Coropoxy Waterborne Acrylic Epoxy 138 Line.
 - 2) Devoe: 4426 Tru-Glaze WB Epoxy Coating <50 g/l VOC.
 - 3) Kelly: Sierra Performance S-16 Epoxy Acrylic Semi-Gloss.
 - 4) Miller: 4200 Water Base Epoxy.
 - 5) Moore: Corotech Waterborne Acrylic Epoxy V450.
 - 6) Parker: UltraTech C145 Pre-Catalyzed Water-Based Epoxy Semi-Gloss.
 - 7) PPG: Pitt-Glaze WB1 Interior Semi-Gloss Pre-Catalyzed Water-Borne Acrylic Epoxy.
 - 8) Rodda: EcoLogic Waterborne Epoxy 70503.
 - 9) S-W: Pro Industrial Waterborne Catalyzed Epoxy, B73 Series.

END OF SECTION

**PLASTIC TOILET COMPARTMENTS
SECTION 10 17 00**

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and other Conditions and other Division 1 - General Requirements sections, apply to the work specified in this Section.

1.02 SECTION INCLUDES

- A. Solid plastic toilet compartments, floor-supported and overhead braced type. (Match existing.)

1.03 RELATED SECTIONS

- A. Section 06112 –Framing and Sheathing: In-wall framing and blocking in partitions.
- B. Section 10800 – Toilet Accessories: Toilet Room Accessories.

1.04 SUBMITTALS

- A. General: All submittals under provisions of Section 01300.
- B. Manufacturer's Data: For information only, submit two (2) copies of manufacturer's detailed technical data for materials, fabrication and installation. Include catalog cuts of hardware, anchors, fastenings, and accessories. Transmit copy of each instruction to the Installer.
- C. Shop Drawings: Submit complete shop drawings of all work prior to fabrication. Indicate plan and elevation of compartments, dimensions, hardware, fittings, attachments, and anchor bolt diagrams.
- D. Samples: Submit samples of each type of hardware specified, if requested.
- E. Certification: Furnish a Certificate of Compliance attesting that plastic panels, hardware material and hardware finishes provided for this Contract are in compliance with specification requirements.
- F. Product Data: Submit product data on panel construction, hardware and accessories.

1.05 QUALITY ASSURANCE:

- A. Field Measurements: Whenever possible, take field measurements prior to preparation of shop drawings and fabrication to ensure proper fitting of the Work. Indicate field measurements on final shop drawings.
- B. Inserts and Anchorage: Provide inserts and anchoring devices which must be built into other work for the installation of toilet partitions and related work. Coordinate delivery with other work to avoid delay.

PLASTIC TOILET COMPARTMENTS - SECTION 10 17 00

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver partitions and component parts in manufacturer's original packages, coverings, or wrappings bearing identification labels designating name and address of supplier and manufacturer.
- B. Carefully handle all materials; protect from damage; deliver under cover in van or similar-type truck.

PART 2 PRODUCTS

2.01 MANUFACTURERS:

- A. Bobrick partitions, doors, & pilasters as specified. (Basis of design)
Overhead braced, heavy duty continuous stainless steel hinges, plastic feet.
- B. Substitutions: Under provisions of Section 01600.

2.02 MATERIALS:

- A. Solid Plastic Sheets (SPS): 1 inch thick; colors: as selected by Architect from manufacturer's full line of colors.
- B. Head Rails: Heavy-duty aluminum extrusion with mill finish.
- C. Wall and Pilaster Brackets: Continuous, full-length, double-ear and single ear full length plastic extrusion.
- D. Hinges: 8" heavy-duty Handicap model in extruded aluminum with bright-dip anodized finish, stainless steel core and nylon shaft.
- E. Shoes, Head Rail Brackets: ASTM A167 Type 304 stainless steel, 20-gauge with No. 4 finish.
- F. Coat Hook/Bumper: Heavy chrome-plated Zamak with rubber bumper.
- G. Door Strike, Keeper, and Latch: Heavy aluminum extrusion (6063-T6 alloy) with clear anodized finish. Provide ADA compliant latch devices at all accessible stalls.

2.03 FABRICATION

- A. Doors, Panels, and Pilasters: Machine all edges to 0.25" radius. Exposed edges shall be free of saw marks. Fasten aluminum edge strip to bottom edge of all panels and doors. Fasten 3" high, 20-gauge stainless steel shoes with theft-proof sex bolts to pilasters.
- B. Hardware: Hinges, door strike, latch, and keeper shall be surface-mounted and thru-bolted to pilaster/door with one-way sex bolts.
- C. Finish: A protective plastic covering shall be applied to all components prior to shipping.
- D. Compartment Size: Design partitions and pilasters to provide compartments as indicated on drawings. Installed height shall be 83½ inches to top of headrail.

PART 3 EXECUTION:

3.01 INSTALLATION:

PLASTIC TOILET COMPARTMENTS - SECTION 10 17 00

- A. General: Erect components in accordance with manufacturer's standard recommendations. Drilling and cutting shall not be visible in finished work. Erect components straight, level, and plumb. Install backing &/or blocking as needed for support.
- B. Doors: Clearance at vertical edges of doors shall be uniform and 3/16" maximum.
 - 1. Equip each door with two hinges, one door latch, and one coat hook and bumper.
 - 2. Install door strike and keeper with door bumper on each pilaster in alignment with door latch.
 - 3. Adjust hinges to locate doors in partial opening position when unlatched. Return /outswing doors to close position. Provide for only partially closed door at ADA locations.
- C. Panels and Pilasters: Attach panels and pilasters to bracket with through sleeve bolts and nuts. Locate headrail joints at pilaster center lines.
 - 1. Provide adjustment for floor variations with screw jack through steel saddles integral with pilaster. Conceal floor fastenings with pilaster shoes.
 - 2. Maintain 3/8 to 1/2 inch space between wall and panels and between wall and end pilasters.

3.02 ADJUSTING

- A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch.

3.03 CLEANING

- A. Remove protective maskings. Clean surfaces.

END OF SECTION

LOCKERS
SECTION – 10 51 00

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Metal lockers.
- B. Locker room units with hinged doors.
- C. Metal tops and filler panels.

1.2 RELATED REQUIREMENTS

- A. Section 03 30 00 - Cast-in-Place Concrete: Concrete base construction.

1.3 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2013.

1.4 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's published data on locker construction, sizes and accessories.
- C. Shop Drawings: Provide locker plan layout, numbering plan and combination lock code. Provide ADA locations as appropriate & approved by owner.
- D. Samples: Submit two samples 3 x 6 inches in size, of each color scheduled.
- E. Manufacturer's Installation Instructions: Indicate component installation assembly.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect locker finish and adjacent surfaces from damage.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Metal Lockers:
 - 1. List Industries Inc: www.listindustries.com.
 - 2. Penco Products, Inc: www.pencoproducts.com.
 - 3. Lyon, Inc: www.lyon.com (Basis of design.)

2.2 METAL LOCKERS

- A. Lockers: Factory assembled, made of formed sheet steel, ASTM A653/A653M SS Grade 33/230, with G60/Z180 coating, stretcher leveled; metal edges finished smooth without burrs; baked enamel finished inside and out.
 - 1. Color: Purple (To match existing as close as possible.)
- B. Locker Body: Formed and flanged; with steel stiffener ribs; electric spot welded.
 - 1. Body and Shelves: 24 gage, 0.0239 inch.
- C. Frames: Formed channel shape, welded and ground flush, welded to body, resilient gaskets and latching for quiet operation.
 - 1. Door Frame: 16 gage, 0.0598 inch, minimum.
- D. Doors: Hollow channel edge construction, 1-3/16 inch thick; welded construction, channel reinforced top and bottom with intermediate stiffener ribs, grind and finish edges smooth.
 - 1. Door Outer Face: 14 gage, 0.0747 inch.
 - 2. Provision for operating handle and locking device.
 - 3. Expanded metal face, diamond perforations for ventilation.

- E. Hinges: Two for doors under 42 inches high; three for doors over 42 inches high; weld securely to locker body and door.
 - 1. Hinge Thickness: 14 gage, 0.0747 inch.
- F. Sloped Top: 20 gage, 0.0359 inch, with closed ends.
- G. Trim: 20 gage, 0.0359 inch.
- H. Coat Hooks: Stainless steel or zinc-plated steel.
- I. Number Plates: Provide oval shaped brass plates. Form numbers 1 inch high of block font style with ADA designation, in contrasting color.
- J. Locks (Locker Rooms): User furnished pad locks.
- K. Keyless Lock (ADA units): Electronic push button access control; ADA compliant.
 - 1. Model DK-ATS with integral pull by Digilock.
 - 2. Substitutions: See Section 01 60 00 - Product Requirements.

2.3 LOCKER ROOM LOCKER UNITS

- A. Size:
 - 1. Width: 15 inches.
 - 2. Depth: 15 inches.
 - 3. Height: 36 inches ea. (72 inches tall plus angled top.)
- B. Configuration: Two tier.
- C. Mounting: Surface mounted.
- D. Base: Fabricate for existing concrete base.
 - 1. Base Height: approx. 4 inch.
- E. Top: Sloped.
- F. Locking: Equipped for padlock hasps.
- G. Ventilation Method: Perforated face.
- H. Class: Conventional.
- I. Accessories: None.
- J. ADA Accessible Lockers: 5 percent of total number of lockers indicated on Drawings; locate as appropriate & approved by owner.
- K. Color: To match existing color.
 - 1. Frame and Doors: Purple.

2.4 FABRICATION

- A. Locker Body: Formed and flanged; with steel stiffener ribs; electric spot welded.
- B. Frames: Formed channel shape, welded and ground flush, welded to body, resilient gaskets and latching for quiet operation.
- C. Doors: Hollow channel edge construction, 1-3/16 inch thick; welded construction, channel reinforced top and bottom with intermediate stiffener ribs, grind and finish edges smooth.
- D. Hinges: Two for doors under 42 inches high; weld securely to locker body and door.
- E. Locking device supplied by Owner; except at noted otherwise.
- F. Number Plates: Provide rectangular shaped brass plates. Form numbers 1/2 to 3/4 inch high of block font style with ADA designation, in contrasting color.
- G. Provide ventilation openings on doors & sides. Use 1-7/32" x 1-1/16" diamond shaped perforations, providing approx. 74% open area.

- H. Form recess for operating handle and locking device.
- I. Finish edges smooth without burrs.
- J. Fabricate sloped metal tops, ends and closure pieces.
- K. Provide end panels and fillerstrips.

2.5 FINISHING

- A. Clean, degrease, and neutralize metal; prime and finish with one coat of baked enamel.
- B. Paint locker bodies and doors in specified color.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that prepared bases are in correct position and configuration.
- B. Verify bases and embedded anchors are properly sized.

3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install lockers plumb and square.
- C. Place and secure on prepared base.
- D. Secure lockers with anchor devices to suit substrate materials. Minimum Pullout Force: 100 lb.
- E. Bolt adjoining locker units together to provide rigid installation.
- F. Install end panels, filler panels, and sloped tops.
- G. Install accessories.
- H. Replace components that do not operate smoothly.

3.3 CLEANING

- A. Clean locker interiors and exterior surfaces.

END OF SECTION

TOILET AND BATH ACCESSORIES
SECTION 10 80 00

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and other Conditions and other Division 1 - General Requirements sections, apply to the work specified in this Section.

1.02 SECTION INCLUDES

- A. Toilet and washroom accessories.
- B. Attachment hardware.

1.03 RELATED SECTIONS

- A. Section 01010 - Summary of Work: Toilet Accessories, supplied by Owner, installed by Contractor (FOIC).
- B. Section 05400 - Cold-Formed Metal Framing: Wall Framing.
- C. Section 06112 - Framing and Sheathing: In wall blocking for support.
- D. Section 10160 - Plastic Toilet Compartments: Attachment to panels.

1.04 REFERENCES

- A. ADA Accessibility Standards - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities.
- B. ASTM A366 - Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.
- C. ASTM A386 - Zinc Coating (Hot-Dip) on Assembled Steel Products.
- D. ASTM B456 - Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium.
- E. ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip.
- F. ASTM A269 - Seamless and Welded Austenitic Stainless Steel Tubing for General Service.

1.05 SUBMITTALS

- A. Submit product data under provisions of Section 01300.
- B. Provide product data on accessories describing size, finish, details of function, attachment methods.
- C. Submit manufacturer's installation instructions under provisions of Section 01300.

1.06 REGULATORY REQUIREMENTS

- A. Install work in conformance with ADA Accessibility Standards.

1.07 SEQUENCING AND SCHEDULING

- A. Coordinate the work of this Section with the placement of internal wall reinforcement and reinforcement of toilet partitions to receive anchor attachments.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Bobrick.
- B. Bradley Corp.
- C. McKinney/Parker.
- D. American Specialties
- E. Substitutions: Under provisions of Section 01600.

2.02 MATERIALS

- A. Sheet Steel: ASTM A366.
- B. Stainless Steel Sheet: ASTM A167, Type 304.
- C. Tubing: ASTM A269, stainless steel.
- D. Adhesive: Contact type, waterproof.
- E. Fasteners, Screws, and Bolts: Hot dip galvanized, tamperproof.
- F. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.

2.03 FABRICATION

- A. Weld and grind smooth joints of fabricated components.
- B. Form exposed surfaces from single sheet of stock, free of joints.
- C. Form surfaces flat without distortion. Maintain flat surfaces without scratches or dents.
- D. Back paint components where contact is made with building finishes to prevent electrolysis.
- E. Shop assemble components and package complete with anchors and fittings.
- F. Provide steel anchor plates, adapters, and anchor components for installation.
- G. Hot dip galvanize exposed and painted ferrous metal and fastening devices.

2.04 FACTORY FINISHING

- A. Galvanizing: ASTM A386 to 1.25 oz/sq yd.
- B. Shop Primed Ferrous Metals: Pretreat and clean, spray apply one coat primer and bake.
- C. Chrome/Nickel Plating: ASTM B456, Type SC-2 satin finish.
- D. Stainless Steel: No. 4 satin luster finish.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that site conditions are ready to receive work and dimensions are as indicated on shop drawings.
- B. Beginning of installation means acceptance of existing conditions.

3.02 PREPARATION

- A. Deliver inserts and rough-in frames to site at appropriate time for building-in.
- B. Provide templates and rough-in measurements as required.
- C. Verify exact location of accessories for installation.

3.03 INSTALLATION

- A. Install fixtures, accessories and items in accordance with manufacturers' instructions.
- B. Install plumb and level, securely and rigidly anchored to substrate.
- C. Provide additional 2x blocking and 5/8 inch Type X gypsum board behind and around cabinet to maintain fire rating for cabinets installed in rated walls.

3.04 SCHEDULE

- A. Toilet Room & compartment Grab Bars: Furnish Bobrick No. B-6806 Series, Type 304 stainless steel 1-1/2 inch o.d. satin finish grab bars in toilet rooms, of lengths and shapes shown, and mounting conditions as required for wall construction on which they are mounted.
- B. Framed Mirrors: Furnish framed tempered mirrors conforming to material and construction provisions of Fed. Spec. DD-M-0411(1), Class 2, Style E, of sizes shown; Bobrick Model B-290 Series, with satin finish, stainless steel frames and theft resistant concealed hanger, sizes as shown on Drawings.
- C. Sanitary Napkin Disposal (ND): Owner furnished, Contractor installed (OFICI). Locate one at each new toilet fixture.
- D. Soap Dispenser (SD): Owner furnished, Contractor installed (OFICI). Locate one at each new sink.

TOILET AND BATH ACCESSORIES - SECTION 10 80 00

- E. Paper Towel Dispenser (PT): Owner furnished, Contractor installed (OF CI). Locate one at each new sink.
- F. Toilet Paper Dispenser (TP): Owner furnished, Contractor installed (OF CI). Locate one at each new toilet fixture.
- G. Seat Protector Dispenser (SP): Owner furnished, Contractor installed (OF CI). Locate one at each new toilet stall.

END OF SECTION

**COMMON WORK RESULTS FOR PLUMBING
SECTION 22 05 00**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. The provisions of This Section, Common Work Results for Plumbing, apply to all sections in Division 22.
- C. All Sections of Division 22 are interrelated. When interpreting any direction, material, and method specified in any section of Division 22 consider it within the entirety of Work in Division 22.

1.2 SUMMARY

- A. The intent of Division 22 Specifications and the accompanying Drawings is to provide a complete and workable facility with complete systems as shown, specified and required by applicable codes. Include all work specified in Division 22 and shown on the accompanying Drawings, including appurtenances, connections, etc., in the finished job.
- B. The Division 22 Specifications and the accompanying Drawings are complementary and what is called for by one shall be as binding as if called for by both. Items shown on the Drawings are not necessarily included in the Specifications and vice versa. Specifications shall supersede drawings in case of conflict.
- C. Imperative language is frequently used in Division 22 Specifications. Except as otherwise specified, requirements expressed imperatively are to be performed by the Contractor.
- D. The Drawings that accompany the Division 22 Specifications are diagrammatic. They do not show every offset, bend, tee, or elbow which may be required to install work in the space provided and avoid conflicts. Offsets and transitions shall be assumed at a minimum at each duct crossing, structural penetrations through shear walls or beams, structural grids where ceiling heights are restricted, and at piping mains. Follow the Drawing as closely as is practical to do so and install additional bends, offsets and elbows where required by local conditions from measurements taken at the Building, subject to approval, and without additional cost to the Owner. The right is reserved to make any reasonable changes in fixture location prior to roughing-in, without cost impact.

1.3 RELATED WORK

- A. The General and Supplemental Conditions apply to this Division, including but not limited to:
 - 1. Drawings and specifications.
 - 2. Public ordinances, permits.
 - 3. Include payments and fees required by governing authorities for work of this Division.
- B. Division 1, General Requirements, applies to this Division.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. All products and equipment shall comply with Oregon Revised Statute (ORS) 453.005(7)(e) prohibiting pentabrominated, octabrominated and decabrominated diphenyl ethers. Where products or equipment within this specification contain these banned substances, provide complying products and equipment from approved manufacturers with equal performance characteristics.
 - 2. General: All work and materials shall conform to the local and State codes, and all Federal, State and other applicable laws and regulations.
 - 3. Contractor responsible for obtaining and payment for all permits, licenses, and inspection certificates required in accordance with provisions of Contract Documents.

COMMON WORK RESULTS FOR PLUMBING
SECTION 22 05 00

- B. Materials and equipment shall be new. Work shall be of good quality, free of faults and defects and in conformance with the Contract Documents.
- C. Apparatus shall be built and installed to deliver its full rated capacity at the efficiency for which it was designed.
- D. The entire plumbing system and apparatus shall operate at full capacity without objectionable noise or vibration.
- E. All equipment shall be installed level and true. Housekeeping pads and curbs shall account for floor or roof slope.
- F. Materials and Equipment:
 - 1. Each piece of equipment furnished shall meet all detailed requirements of the Drawings and Specifications and shall be suitable for the installation shown. Equipment not meeting all requirements will not be acceptable, even though specified by name along with other manufacturers.
 - 2. Where two or more units of the same class of equipment are furnished, use products of the same manufacturer. Component parts of the entire system need not be products of same manufacturer.
 - 3. Furnish all materials and equipment of size, make, type, and quality herein specified.
 - 4. Equipment scheduled by performance or model number shall be considered the basis of the design. If other specified manufacturer's equipment is provided in lieu of the basis of design equipment the contractor is responsible for all changes and costs which may be necessary to accommodate this equipment, including different sizes and locations for connections, different electrical characteristics, different dimensions, different access requirements or any other differences which impact the project.
- G. Workmanship:
 - 1. General: All materials shall be installed in a neat and professional manner.
 - 2. Manufacturer's Instructions: Follow manufacturer's directions where they cover points not specifically indicated. If they are in conflict with the Drawings and Division 22 Specifications, obtain clarification before starting work.
- H. Cutting and Patching:
 - 1. Cutting, patching, and repairing for the proper installation and completion of the work specified in this Division including plastering, masonry work, concrete work, carpentry work, and painting shall be performed by skilled craftsmen of each respective trade in conformance with the appropriate Division of Work.
 - 2. Additional openings required in building construction shall be made by drilling or cutting. Use of jackhammer is specifically prohibited.
 - 3. Fill holes which are cut oversize so that a tight fit is obtained around the sleeves passing through.
 - 4. Beams or columns shall not be pierced without permission of Architect and then only as directed.
 - 5. All new or existing work cut or damaged shall be restored to its original condition. Where alterations disturb lawns, paving, walks, etc., the surfaces shall be repaired, refinished, and left in condition existing prior to commencement of work.

1.5 SUBMITTALS

- A. Submit in accordance with section 01 33 00- Submittal Procedures.
- B. Shop Drawings:
 - 1. Shop drawings shall include but are not limited to:
 - a. Plumbing fixtures, carriers, water hammer arrestors, piping supports, pipe insulation.
 - b. Beam penetration drawings indicating beam penetrations meeting the requirements indicated on the floor plans and on the structural drawings to a minimum of 1/4" = 1'-0" scale.
 - c. Slab penetration drawings of plumbing, to a minimum of 1/4-inch equals 1'-0" scale.
 - 2. Submit shop drawings for review prior to beginning fabrication. Additional shop drawings may be requested when it appears that coordination issues are not being resolved in the field or when there

COMMON WORK RESULTS FOR PLUMBING
SECTION 22 05 00

is a question as to whether contract documents are being complied with or the design intent is being met.

C. Product Data:

1. In general, submit product data for review on all scheduled pieces of equipment, include but are not limited to plumbing fixtures, carriers, water hammer arrestors, piping supports, pipe insulation.
2. Complete product connection requirements on all equipment requiring electrical connections or connections by other trades, and as required by each specification section or by Drawing notes. Include manufacturer's detailed shop drawings, specifications and data sheets. Data sheets shall include capacities, RPM, BHP, pressure drop, design and operating pressures, temperatures, and similar data. Manufacturer's abbreviations or codes are not acceptable.
3. Indicate equipment operating weights including bases and weight distribution at support points.

D. Submission Requirements:

1. Shop Drawings and Product Data:
 - a. Refer to Division 1 for additional requirements related to submittals.
 - b. Submit copies of shop drawings and product data for Work of Division 22 in a 3-ring loose leaf binder with each item filed under a tab and labeled with its respective specification section number, article and paragraph, and mark if applicable.
 - c. Submit electronic copies of shop drawings and product data for Work of Division 22 in PDF format with each item filed under a folder and labeled with its respective specification section number, article, and paragraph and mark, if applicable.
 - d. Include a complete index in the original submittal. Indicate both original items submitted and note stragglers that will be submitted at a later date to avoid delay in submitting.
 - e. Shop drawings and product data shall be included with the original submittal. Partial submittals will not be accepted.

E. Contractor Responsibilities: It shall be the Contractor's responsibility to:

1. See that all submittals are submitted at one time and are in proper order.
2. Ensure that all equipment will fit in the space provided.
3. Assure that all deviations from Drawings and Specifications are specifically noted in the submittals. Failure to comply will void review automatically.

1.6 OPERATING AND MAINTENANCE MANUAL, PARTS LISTS, AND OWNERS INSTRUCTIONS

- A. Refer to Division 1 for additional requirements.
- B. Submit two bound copies of manufacturer's operation and maintenance instruction manuals and parts lists for each piece of equipment or item requiring servicing. Literature shall be on 8- 1/2"x11" sheets or catalogs suitable for side binding. Submit data when the work is substantially complete, packaged separately, and clearly identified in durable 3-ring binder. Include name and contact information for location of source parts and service for each piece of equipment. Clearly mark and label in each submittal, the piece of equipment provided with the proper nameplate and model number identified. Provide wiring diagrams for all electrically powered equipment. Also provide electronic (.pdf format) of all information in hard copy.

1.7 PROJECT CONDITIONS

- A. Existing Conditions: Prior to bidding, verify and become familiar with all existing conditions by visiting the site, and include all factors which may affect the execution of this Work. Include all related costs in the initial bid proposal.
- B. Coordinate exact requirements governed by actual job conditions. Check all information and report any discrepancies before fabricating work. Report changes in time to avoid unnecessary work.
- C. Coordinate shutdown and start-up of existing, temporary, and new systems and utilities. Notify Owner one week in advance.

1.8 WARRANTY

- A. Provide a written guaranty covering the work of this Division (for a period of one calendar year from

**COMMON WORK RESULTS FOR PLUMBING
SECTION 22 05 00**

the date of acceptance by the Owner) as required by the General Conditions.

- B. Provide manufacturer's written warranties for material and equipment furnished under this Division insuring parts and labor for a period of one year from the date of Owner acceptance of Work of this Division.
- C. Correct warranty items promptly upon notification.

1.9 TEST REPORTS AND CERTIFICATES

- A. Contractor shall submit one copy of all test reports and certificates specified herein to the Architect.

1.10 SUBSTITUTIONS

- A. Contractor shall submit any requests for product substitutions in accordance with the Instructions to Bidders, section 01 60 00 – Product Requirements and the General and Supplemental Conditions.

PART 2 - PRODUCTS

2.1 PLUMBING FIXTURES

- A. Per schedule on drawings.

2.2 PIPING

- A. Waste and vent piping above grade:
 - 1. Cast iron, ASTM A 74 heavy weight hub and sigot ASTM C564 neoprene gaskets and conform to ASTM C1563.
 - 2. Cast Iron ASTM A888/CISPI 301 hubless with coupling assembly: standard duty ASTM C1277 or CISPI 301, Anaco, Mission, Tyler.
- B. Hot and Cold water piping above grade, primer piping above grade:
 - 1. Copper tube: ASTM B88 Type L Drawn. Fittings: ASTM B16.18 copper. Joints: ASTM B32, alloy Sn95 solder.

2.3 PIPE INSULATION

- A. Fiberglass: ASTM C547 rigid, non-combustable. Thermal conductivity value of .27 BTU*in/(hr*sf°F) at 75 degrees F. All service vapor retarder jacket: white kraft paper reinforced with glass fiber and bonded to aluminum foil, with self-sealing longitudinal laps and butt strips or vapor barrier mastic. Thickness per current Oregon energy code.
- B. Fittings: PVC fitting covers, Schuller Zeston 2000, Knauf Proto Fitting, or approved. One piece molded type fitting covers and jacketing material, gloss white.
- C. Inserts: At pipe hangers and supports, provide thermal inserts with same outside diameter as pipe insulation. ASTM C533 calcium silicate with vapor barrier.

2.4 VALVES

- A. Two-piece, full port ball valve, bronze, 125 psig rating, extended stem/handle to accommodate insulation. Apollo, Armstrong, Conbraco, Crane, Hammond, Kennedy, Nibco, Stockham, Watts Wilkins, or approved.

2.5 ACCESS PANELS

- A. Furnish under this Division as specified in section 08 31 00-Access Doors & Panels.

**COMMON WORK RESULTS FOR PLUMBING
SECTION 22 05 00**

2.6 SHOCK ARRESTORS

- A. PPP, JR Smith. Size per manufacturer's recommendations based on fixture units.

2.7 PIPE SLEEVES

- A. Interior Wall and Floor Sleeves: 18 gauge galvanized steel, or another pre-approved system.
- B. Interior Wall and Floor Sleeves (fire rated): Fire rated and water tight system approved by Authority Having Jurisdiction and Owners Insurance underwriter, with rating equal to floor or wall penetration, and designed specifically for the floor or wall construction, piping material, size and service.
- C. Exterior Wall Sleeves: Cast iron.
- D. On Grade Floor Sleeves: Same as exterior wall sleeves.

2.8 FLOOR, WALL AND CEILING PLATES

- A. Furnish stamped split type plates as follows:
 - 1. Floor Plates: Cast brass, chromium plated.
 - 2. Wall and Ceiling Plates: Spun aluminum.

PART 3 – EXECUTION

3.1 GENERAL

- A. Installation shall meet current Oregon Plumbing Specialty Code as a minimum plumbing installation standard. Where applicable (e.g. seismic restraint), other applicable specialties codes set minimum standard. A higher standard may be required at times by drawings, specifications, or manufacturer's installation instructions.

3.2 ACCESS PANELS

- A. Install in accord with manufacturer's recommendations, coordinated with architectural features.
- B. Furnish 18x18-inch panels for ceilings and for access to equipment in soffits and shafts, and 12x12-inch for walls unless indicated otherwise.
- C. Furnish where indicated and where required to access valves, trap primers, shock arresters, and other appurtenances requiring operation, service or maintenance. Submit proposed locations for review prior to installation.

3.3 PIPE HANGERS

- A. Size to accommodate pipe with insulation/inserts at hangers.

3.4 SLEEVES

- A. Interior Floor and Wall Sleeves: Provide sleeves large enough to provide 3/4-inch clearances around pipe or ductwork. Where pipe or ductwork is insulated, insulation shall pass continuously through sleeve with 3/4-inch clearance between insulation and sleeve.
- B. Sleeves Through Rated Floors and Walls: Similar to interior sleeves except install fire rated system approved by Authority Having Jurisdiction and Owners insurance underwriter, with rating equal to floor or wall penetration, and designed specifically for the floor or wall construction, piping material, size and service.
- C. Exterior Wall Sleeves Below Grade: Provide water tight sleeves. Install at pipes entering building below grade and where shown. Adjust to provide positive hydrostatic seal. Contractor shall be responsible for following manufacturer's procedure for installing and tightening seal. Secure sleeves against displacement.
- D. On Grade Floor Sleeves: Same as below grade exterior wall sleeves, caulked from inside.
- E. Exterior Wall Sleeves Above Grade: Similar to interior wall sleeves except caulk outside with Tremco

COMMON WORK RESULTS FOR PLUMBING
SECTION 22 05 00

Dymeric Sealant.

- F. Layout work prior to concrete forming. Do all cutting and patching required. Reinforce sleeves to prevent collapse during forming and pouring.
- G. All floor sleeves shall maintain a water barrier by providing a water tight seal or they shall extend 1-inch above finished floor except through mechanical equipment room floors and shafts where sleeves shall extend 2 inches above finished floor level. Sleeves through roof shall extend 8 inches above roof. Wall sleeves shall be flush with face of wall unless otherwise indicated. Waste stacks using carriers shall have sleeves flush with floor and sealed. Sleeves through planters shall extend 8 inches above planter base.
- H. Do not support pipes by resting pipe clamps on floor sleeves. Supplementary members shall be provided so pipes are floor supported.
- I. Special sleeves detailed on drawings shall take precedence over this section.

3.5 CLEANING

- A. General: Clean plumbing equipment, fixtures and piping of stampings and markings (except those required by codes), iron cuttings, and other refuse.
- B. Painted Surfaces: Clean scratched or marred painted surfaces of rust or other foreign matter and paint with matching color industrial enamel, except as otherwise noted.
- C. Additional requirements are specified under specific Sections of this Division.

3.6 EQUIPMENT PROTECTION

- A. Keep pipe and conduit openings closed by means of plugs or caps to prevent the entrance of foreign matter. Protect piping, conduit, fixtures, equipment and apparatus against dirty water, chemical or mechanical damage both before and after installation. Restore damaged or contaminated fixtures, equipment, or apparatus to original conditions or replace at no cost to the Owner.
- B. Protect bright finished shafts, bearing housings, and similar items until in service. No rust will be permitted.
- C. Cover or otherwise suitably protect equipment and materials stored on the job site.

3.7 ACCESSIBILITY

- A. General: Locate valves, thermometers, cleanout fittings and other indicating equipment or specialties requiring frequent reading, adjustments, inspection, repairs, and removal or replacement conveniently and accessibly with reference to the finished building.
- B. Thermometers and Gauges: Install thermometers and gauges so as to be easily read from the floors, platforms and walkways.

3.8 FLOOR, WALL AND CEILING PLATES

- A. Install on piping and ductwork passing through finished walls, floors, ceilings, partitions, and plaster furrings. Plates shall completely cover opening around pipe.
- B. Secure wall and ceiling plates to pipe, insulation, or structure.
- C. Plates shall not penetrate insulation vapor barriers.
- D. Plates not required in mechanical rooms or unfinished spaces.

3.9 PAINTING

- A. General: Coordinate painting of mechanical equipment and items with products and methods in conformance with the appropriate Division of Work, Painting. All exposed work under this division shall receive either a factory painted finish or a field prime coat finish, except:
 - 1. Exposed copper piping.
 - 2. Aluminum jacketed outdoor insulated piping.

COMMON WORK RESULTS FOR PLUMBING
SECTION 22 05 00

- B. Equipment Rooms and Finished Areas:
 - 1. Insulation: Not painted.
 - 2. Hangers, Uninsulated Piping, Miscellaneous Iron Work, Structural Steel Stands, Uninsulated Tanks, and Equipment Bases: Paint one coat of black enamel.
 - 3. Steel Valve Bodies and Bonnets: One coat of black enamel.
 - 4. Brass Valve Bodies: Not painted.
 - 5. Equipment: One coat of grey machinery enamel. Do not paint nameplates.
- C. Concealed Spaces (above ceilings, not visible):
 - 1. Insulation: Not painted.
 - 2. Hangers, Uninsulated Piping, Miscellaneous Iron Work, Valve Bodies and Bonnets: Not painted.
- D. Exterior Steel: Wire brush and apply two coats of rust-inhibiting primer and one coat of grey exterior machinery enamel.
- E. Exterior Black Steel Pipe: Wire brush and apply two coats of rust-inhibiting primer and one coat of exterior enamel. Painting schemes shall comply with ANSIA 13.1.

3.10 ADJUSTING AND CLEANING

- A. Before operating any equipment or systems, make thorough check to determine that systems have been flushed and cleaned as required and equipment has been properly installed, lubricated, and serviced. Check factory instructions to see that installations have been made accordingly and that recommended lubricants have been used.
- B. Use particular care in lubricating bearings to avoid damage by overlubrication and blowing out seals. Check equipment for damage that may have occurred during shipment, after delivery, or during installation. Repair damaged equipment as approved or replace with new equipment.

3.11 ELECTRICAL EQUIPMENT

- A. Piping for plumbing systems not serving electrical space shall not be installed in any switchgear room, transformer vault, telephone room, or electric closet except as indicated.
- B. Piping for plumbing systems shall not pass over switchboards or electrical panel boards. Where conflicts exist, bring to attention of Architect.

3.12 EQUIPMENT CONNECTIONS

- A. Make final connections to equipment specified in sections other than Division 22 of the specifications and Owner furnished equipment in accordance with manufacturer's instructions and shop drawings furnished and as indicated.
- B. Piping:
 - 1. Connections shall include hot and cold water, natural gas, sanitary waste and vent, lab waste and vent.
 - 2. Provide valves and specialties as specified and as detailed on the Drawings. Provide increasers, reducers, and any other fittings required for complete installation.
 - 3. All piping connections shall be independently supported to prevent undue strain on equipment.

END OF SECTION

Symbol	Fixture Type	Mfr	Model	Description	Waste	Vent	CW	HW	Notes
C-1	Single ADA Water Cooler with bottle filler	Elkay	EZSG8WSLK	wall-hung, push bar operated, sensor activated bottle filler, vandal resistant bubbler guards. 115V, 7A	1.5"	1.5"	1/2"	--	Mount as required by applicable ADA standards. Provide service valve on CW with access panel. Provide MLP100 in-wall carrier.
WC-1	Water Closet,	Kohler	Kingston	White vitreous china, wall-hung, elongated bowl, siphon jet1.5" top spud	4"	2"	1 1/4"		Complete w/Sloan Royal 111-1.28 SMO battery-operated w/metal sensor cover
WC-2	Water Closet, ADA installation	Kohler	Kingston	White vitreous china, wall hung, elongated bowl, siphon jet1.5" top spud	4"	2"	1 1/4"		Complete w/Sloan Royal 111-1.28 SMO battery-operated w/metal sensor cover
WS-1	Lavatory Wash station	Bradley	MG series	2 station, wall-hung, W/Chicago 802-V665ABCP faucet, 2.2 gpm, vandal-proof metering push handles, adjustable time cycle, 4" spout.	2"	1.5"	1/2"	.5"	Provide wall cleanout, JR Smith 4530 round stainless steel vandal resistant cover and screw.
HB-1	Hose bibb	Chicago	293-E27CP	Wall-mounted hose bibb with vandal resistant hex screw removable handle or key operation, vaccum breaker hose thread outlet.			1/2"		Install as close as practical to under WS-1
HB-2	Hose bibb	Chicago	293-244CP	Wall-mounted hose bibb with vandal resistant hex screw removable handle or key operation, integral check stop, hose thread outlet.			1/2"		Coordinate install location with ice machine CW connection point.
FD-1	Floor drain	J.R. Smith	3510	General duty floor drain w/round funnel strainer, trap primer.	2"				Use to accept drainage tube from ice machine.

SEHS Women's Locker Room Remodel
Plumbing Fixture Schedule

3/21/18

**DUCTWORK
SECTION 23 31 00**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Metal ductwork.

1.2 REFERENCES

- A. SMACNA - HVAC Duct Construction Standards - Metal and Flexible, current edition.
- B. Pressure Classification – 2” static positive and negative.

1.3 QUALITY ASSURANCE

- A. Installation and fabrication shall be performed by company(s) specializing in commercial sheet metal work for a minimum of five years documented experience. Contractor must have successfully completed two ductwork projects of similar scope and complexity, for a value of \$200,000 or more within the last four years.
- B. Fabricate, install and support in accordance with SMACNA - HVAC Duct Construction Standards - Metal and Flexible, current edition, and Oregon Mechanical Specialty Code, current edition.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Galvanized Steel Ducts: ASTM A525 and ASTM A527 galvanized steel sheet, lock-forming quality, having zinc coating of in conformance with ASTM A90.
- B. Fabricate metal ductwork in accordance with SMACNA Low Pressure Duct Construction Standards, except as indicated.
- C. Liquid Duct Sealer: United McGill Corp. United Duct Sealer, Hardcast Inc. IG-601, Miracle Adhesives Corp. D-619, Ductmate Proseal. UL listed flamespread rating max of 35, smoke development max 50 when applied in a 2” wide strip at .0032 inch thickness.

PART 3 EXECUTION

DUCTWORK
SECTION 23 31 00

3.1 INSTALLATION

- A. All shall be lined with 1" liner for acoustic attenuation.
- B. Install, support, and seal ducts in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, latest addition.
- C. Duct Sizes are inside clear dimensions. All ductwork is insulated.
- D. Locate ducts with sufficient space around equipment to allow normal operating and maintenance activities.
- E. Provide turn vanes in elbows.
- F. Use double nuts and lock washers on threaded rod supports.
- G. During construction provide temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system, or conditioned air from escaping.
- D. Clean ductwork prior to applying duct sealing products.

3.2 RECORD DRAWINGS

- A. Mark-up construction documents, including dimensions, to show actual duct routing and configuration where is differs from construction drawings.

3.3 CLEANING

- A. Verify new ductwork sections are clean and clear of any debris prior to assembly.
- B. Clean work areas thoroughly of all debris, dirt and dust.

END OF SECTION

BASIC ELECTRICAL MATERIALS AND METHODS
SECTION 26 05 00

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all items, articles, materials, equipment, operations and/or methods listed, mentioned, shown and/or scheduled on the drawings and/or in these specifications, including all labor, services, permits, fees, utility charges, and incidentals necessary and required to perform and complete the electrical work described in this Division. Apply for all permits early in the project to avoid problems due to code revisions.
- B. See the contract conditions (general and supplementary) and Division 1 for requirements concerning this Division including, but not limited to, submittals, shop drawings, substitution requests, change orders, operation and maintenance manuals, record drawings, coordination, permits, record documents, contract closeout and warranties.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- C. Mechanical equipment motors to be furnished under another Division but connected under this Division. Starters to be mounted and connected by this Division, but furnished by another Division unless otherwise noted on the electrical drawings. Verify and coordinate all equipment locations and electrical characteristics with other trades involved in the work. Coordination shall be done prior to rough-in or ordering equipment.
- D. Control wiring for mechanical equipment beyond provisions shown on the Electrical Drawings shall be performed under another Division of the work.

1.03 QUALITY ASSURANCE

- E. Do all work in accordance with National Electrical Code, state and local codes and amendments, National Fire Codes, American with Disabilities Act, and all other applicable codes.

1.04 PROJECT CONDITIONS

- F. The Contractor shall inspect the job site prior to bidding and familiarize himself with existing conditions which will affect the work. Prior to start of work, obtain "As built", "Record", or other Drawings showing existing underground utilities.
- G. Electrical drawings are diagrammatic indicating approximate location of outlets, lighting fixtures, electrical equipment, etc. Consult the Architectural, Structural, and Mechanical Drawings to avoid conflicts with equipment, structural members, etc. When required make all deviations from Drawings to make the work conform to the building as constructed, and to related work of others. Minor relocations ordered prior to installation may be made without added cost to Owner.
- H. Call to the attention of the Architect any error, omission, conflict or discrepancy in Drawings and/or Specifications. Do not proceed with any questionable items of work until clarification of same has been made.
- I. Under no conditions are beams, girders, footings or columns to be cut for electrical items unless so shown on Drawings or written approval obtained from the Architect.
- J. Verify the physical dimensions of each item of electrical equipment to fit the available space and promptly notify the Architect prior to roughing-in if conflicts appear. Coordination of equipment to the available space and to the access routes through the construction shall be the Contractor's responsibility.

BASIC ELECTRICAL MATERIALS AND METHODS
SECTION 26 05 00

1.05 SHOP DRAWINGS

- K. Prior to ordering equipment, and prior to Contractor's first application for payment, the Contractor shall, within 30 days after award of this work, submit to the Architect six (6) complete sets of shop drawings neatly bound in 3-ring binder form, with index page, indexed tabs corresponding to specification section numbers, data sheets of materials and equipment, wiring diagrams, details and calculations. First sheet shall list project name, contractor name, address, telephone, fax, and date. In addition this page shall bear Contractor's stamp, signature or other means to show that he has inspected same and certified that submitted material is correct in regard to quantity, size, dimension, quality and is coordinated with the Contract Documents. Shop drawings not in compliance will be returned without review.
- L. Data sheet shall identify equipment type, size, rating, style, catalog numbers and manufacturer's name of each item. Identification shall be with black arrows or black lines. Red and highlighters shall not be used.
- M. Wiring diagrams shall be specific to equipment provided clearly identifying wire sizes, terminations and connections. Diagrams required for lighting controls, clock systems, public address and sound system and fire alarm systems.
- N. Floor plans drawings shall indicate devices, zones/addresses and wiring.
- O. Contractor agrees that Shop Drawing Submittals processed by the Architect are not Change Orders; that the purpose of Shop Drawing Submittals by the Contractor is to demonstrate to the Architect that the Contractor understands the design concept, that he demonstrates his understanding by indicating which equipment and material he intends to furnish and install and by detailing the fabrication and installation methods he intends to use.
- P. Contractor further agrees that if deviations, discrepancies or conflicts between Shop Drawings and Specifications are discovered either prior to or after Shop Drawing Submittals are processed by the Architect, the design Drawings and Specifications shall control and shall be followed.

1.06 EQUIPMENT, INSTALLATION, OPERATIONS AND MAINTENANCE MANUALS

- Q. Prior to Contractor's last application for payment, the Contractor shall, submit to the Architect six (6) complete sets of Equipment, Installation, O&M Manuals. Include corrected shop drawings. Format shall be same as shop drawings.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All materials shall be new and bear manufacturer's name, model number, electrical characteristics and other identification. All equipment to be U.L. listed or tested by agency approved by authorities having jurisdiction.
- B. Material and equipment shall be standard product of manufacturer regularly engaged in production of similar material for at least five years (unless specifically exempted) and shall be manufacturer's latest design.
- C. If the description of a product is in conflict with the product as specified in the catalog number, the description shall generally take precedence. Contact the Architect for clarification if this occurs.

BASIC ELECTRICAL MATERIALS AND METHODS

SECTION 26 05 00

- D. All equipment for essential or life safety systems must be rated and certified for the appropriate seismic zone.

2.02 BOXES

- E. Outlet and junction boxes shall be sized in accordance with code requirements or as noted on the drawings.
- F. Unless otherwise specified or shown on the drawings, all outlet boxes for new work shall be galvanized steel knockout, outlet boxes. Gangable boxes are not acceptable. Outlet boxes shall not be smaller than 4" square and 1-1/2 inches in depth, unless otherwise noted. All outlet box covers, rings, or other fittings shall be galvanized. Boxes which are exposed to the weather shall be cast metal. Outlet boxes for phone and data outlets shall be 2-1/8" deep boxes.
- G. Outlet boxes shall be designed for the intended use, and shall be installed flush with finish surface lines or not more than 1/8 inch back and shall be level and plumb. Long screws with spacers or shims for mounting devices are not acceptable. No combustible materials shall be exposed to wiring at outlets.
- H. Outlet boxes on opposite sides of fire or sound isolating partitions shall have a minimum horizontal separation of 24". Back to back boxes are not permitted in any walls.
- I. Floor boxes shall be Walker RFB4 with RAKMII flush access hatch with carpet trim. Provide plates for mounting of duplex receptacles and RF-45 communications outlets. If the number of communications outlets exceeds the quantity which fits in a standard plate, provide a custom plate to accommodate the increased quantity.
- J. Floor boxes which contain voice and data cable often are shown with an empty conduit running up a wall and stubbing into the ceiling. Where no conduit is shown, stub a 1" conduit out the bottom of the low voltage section of the box and into the ceiling space of the floor below.

PART 3 - EXECUTION

3.01 GENERAL INSTALLATION METHODS

- A. Cutting or notching shall be kept to an absolute minimum and done when, and in a method approved by the Architect. Patch and correct finished surfaces damaged by electrical work.
- B. Devices and equipment shall be level and plumb and installed parallel with structural building lines. All equipment and enclosures shall fit neatly without gaps, openings, or distortions. Provide approved devices for closing all unused openings.
- C. Arrange circuit wiring as shown on the Drawings and do not alter or combine runs or homeruns without the specific approval of the Architect. Feeder runs shall not be recombined or altered.
- D. Ballasts, contactors, starters, transformers and like equipment which are found to be noticeably noisier than other similar equipment on the project will be deemed defective and shall be replaced.

BASIC ELECTRICAL MATERIALS AND METHODS

SECTION 26 05 00

- E. In general, the mounting heights shall be as noted on the Drawings, or as listed below, the Architectural Interior Elevations and drawing notes taking precedence. Where no heights are indicated, request clarification from the Architect. Consult the Architectural, Mechanical and Structural drawings to avoid conflicts prior to roughing-in and for exact locations. All dimensions are to the center of the device unless otherwise noted. Lighting dimensions are to the bottom of suspended fixtures and center of wall mounted fixtures unless otherwise noted.

Light Switches	46 inches
Convenience Receptacles	18 inches
Panelboard top	72 inches
Fire Alarm Signals	80 inches to bottom (but at least 6" below ceiling)
Fire Call Stations	46 inches
Telephone Outlets	18 inches

Where raceways penetrate floors, ceilings, ducts, chases, and fire walls, provide fire stopping to maintain integrity of the fire assembly. Firestopping method shall be approved by the Code Authority having jurisdiction.

- F. All materials and equipment installed under this work shall be properly and adequately supported from the building structure except where ceiling construction or other provisions are specifically designed to support them. Support systems shall provide a safety factor of four. This shall apply to chains, hangers, anchors, clamps, screws, structural iron, and all other hardware and appurtenances associated with the support system.
- G. Rough-in for communications outlets for phone and data systems shall consist of a 4" square 2.25" deep (4SD) box with a single gang mud ring. Provide a 3/4" conduit to an accessible ceiling space. Conduit shall be terminated above the ceiling with protective insulated bushing and a pull string installed.
- H. Maintain the following minimum separations from voice and data cables. Power conduit - 12", transformers and motors - 40", fluorescent lighting - 12". Coordinate with the voice and data installer to assure these separations are met.

3.02 LOW VOLTAGE WIRING METHODS

- I. Unless stated otherwise in these specifications, or on the drawings, raceways for wiring of Public Address and Sound, Data, Voice and Cable TV systems utilizing N.E.C. class II current limitation methods will be required only in walls, inaccessible ceilings, and areas where conductors might be exposed to physical damage.
- J. Cables shall be either enclosed entirely in conduit raceway systems or be plenum rated. The ceiling spaces in this project are NOT air plenums.
- K. Conductors shall be concealed in all finished spaces and shall be run parallel to structural lines and supported at minimum 5 feet intervals from structure. Additional 6-inch pigtail shall be provided at outlet. If conductors are exposed in accessible ceiling spaces, provide slack in cable near outlet with additional 4 feet of cable coiled in ceiling and attached to wall for flexibility.
- L. Reroute existing data, voice and cable TV cables and outlets as shown on drawings including reterminating and testing of devices to meet Level 3 standards. If damaged during construction, replace all cables and outlets, splicing not allowed.

BASIC ELECTRICAL MATERIALS AND METHODS
SECTION 26 05 00

3.03 LABELING

- M. Clearly and properly label the complete electrical system to indicate the loads served or the function of each item of equipment provided under this work.
- N. Receptacles, switches and occupancy sensors: Provide panel and circuit identification on face of device. Black letters on clear background.
- O. Switchboards, distribution panelboards, panelboards, motor control centers, starters and disconnects: Provide engraved phenolic nameplate labels. Black with 0.5 inch high white letters. Labels shall identify name of equipment. Labels for switchboards, distribution panelboards, panelboards and motor control centers shall in addition identify voltage, phase, AIC rating with labels for load of each branch device and starter..

3.04 SAFETY

- P. The Engineer has not been retained or compensated to provide design and construction review services relating to the Contractor's safety precautions or to means, methods, techniques, sequences or procedures required for the contractor to perform the work.

3.05 DEMOLITION

- Q. It is the intent of these specifications to require the contractor to make all necessary adjustments to the electrical system, required to meet code, and accommodate installation of the new and remodeled work.
- R. Remove all existing equipment, devices and associated wiring from walls, ceilings, floors, and other surfaces scheduled for remodeling, relocation, or demolition unless specifically shown as retained or relocated on the drawings.
- S. Disconnect all existing mechanical equipment scheduled for removal or relocation.
- T. Locations of items shown on the drawings as existing are based on as-built and other drawings which may contain errors. The Contractor shall verify the correctness of the information shown prior to bidding and provide such labor and material as is necessary to accomplish the intent of the contract documents. The plans may show some demolition conditions, but are not intended to show all of them.
- U. All materials accumulated during the demolition process are the Contractors property and shall be removed from the job site unless noted otherwise.
- V. Remove all abandoned raceways and cables.

3.06 POWER INTERRUPTIONS

- W. Keep outages to occupied areas to a minimum and prearrange all outages with the Owner's representative and utilities involved. Requests for outages shall state the specific dates and hours and the maximum durations, with the outages kept to these specified times.
- X. Contractor shall coordinate with the Owner so that work can be scheduled not to interrupt operations, normal activities, building access, etc. Coordinate work with other crafts for proper scheduling.
- Y. No circuits shall be turned off without prior approval from owner. Coordinate with the Owner any interruptions which affect the operation of the remaining portions of the facility.

BASIC ELECTRICAL MATERIALS AND METHODS

SECTION 26 05 00

- Z. This contractor will be liable for any damages resulting from unscheduled outages or for those not confined to the preapproved times. Include all costs for overtime labor as necessary to maintain electrical services in the initial bid proposal. Temporary wiring and facilities, if used, shall be removed and the site left clean before final acceptance. Requests for outages must be submitted at least (5) days prior to intended shutdown time.

3.07 GROUNDING

- AA. Ground all electric equipment, raceways and enclosures in accordance with code rules and established safety practices.
- BB. Provide green grounding conductors in all raceways sized per NEC.

3.08 EQUIPMENT CONNECTIONS

- CC. The location and method for connecting to each item of equipment shall be verified prior to roughing-in. The voltage and phase of each item of equipment shall be checked before connecting. Motor rotations shall be made in the proper direction. Pump motors are not to be test run until liquid is in the system and proper lubrication to all bearings in unit is checked.
- DD. Conduit, wire and circuit breaker sizes for mechanical and equipment are based on the equipment ratings of one manufacturer. The equipment actually furnished may have entirely different electrical characteristics. Conduit, wire, circuit breakers, disconnects, etc. shall not be ordered or installed until exact electrical requirements are obtained. Responsibility for this coordination rests with the Contractor.

3.09 SEISMIC BRACING

- EE. Furnish and install all seismic bracing of equipment, feeders, and other electrical items in accordance with prevailing codes. Provide and submit the required designs, calculations, certifications, and stamped drawings to the authority having jurisdiction and obtain their approval prior to installation or fabrication.

3.10 PAINTING

- FF. All electrical equipment and conduit exposed in finished areas and on exterior walls are to be painted to match surrounding surfaces.
- GG. Contractor shall coordinate the timing of painting requirements.
- HH. Refer to Architectural specifications for methods and materials.

3.11 PROJECT RECORD DOCUMENTS

- II. Maintenance of Documents:
1. Maintain at Jobsite, One Record Copy of: Contract Drawings, Specifications, Addenda, Reviewed Shop Drawings, Change Orders, Other Modifications to Contract and Field Test Records.
 2. Keep apart from documents used for construction.
 3. Keep documents available at all times for inspection by Architect.
- JJ. Recording:
1. Label each document "PROJECT RECORD."
 2. Keep record documents current. Do not permanently conceal any work until required information has been recorded.

BASIC ELECTRICAL MATERIALS AND METHODS

SECTION 26 05 00

3. Contract Drawings, legibly mark to record actual construction; including but not limited to the following:
Depths of various elements; locations of underground items, with dimensions to building walls and corners; changes of dimensions and details; changes made by Addendum, Field Orders or Change Order.
Specifications and Addenda; Legibly mark each Section to record changes made by Addendum, Field Order or Change Order.

3.12 COMPLETION

- KK. Complete each system as shown or specified herein and place in operation except where only roughing-in or partial systems are called for. Each system shall be tested and left in proper operation free of faults, shorts or unintentional grounds. Demonstrate system in the presence of the Architect, the Owner or their representative when requested.

3.13 FINAL OBSERVATION

- LL. Contractor shall submit written certification that:
1. Contract Documents have been reviewed.
 2. Contractor has inspected Project for compliance with Contract Documents.
 3. Work has been completed in accordance with Contract Documents.
 4. Equipment and Systems have been tested and are operational.
 5. Project is completed and ready for final inspection.
- MM. Architect will make final inspection as soon as possible after receipt of Certification.
- NN. Should Architect consider that work is finally complete in accordance with Contract Document requirements, Contractor shall make Contract Closeout submittals.
- OO. Should Architect consider that work is not finally complete:
1. He will so notify Contractor, stating reasons.
 2. Contractor shall take immediate steps to remedy deficiencies, and send second written notice to Architect certifying that work is complete.
 3. Architect will reinspect work.
- PP. The Architect will make two final inspections. The first will determine deficiencies and errors in the work and the second will determine whether or not the noted deficiencies and errors have been satisfactorily corrected.
- QQ. If additional inspections are required because of the Contractor's failure to complete the deficiencies and errors prior to the second inspection, costs for the successive inspections will be back-charged to the Contractor by the Owner, who, in turn, will reimburse the Architect. Charges will be based as follows:
1. Architect time at current billing rates.
 2. Travel time, and all other expenses incurred in making inspections.
- RR. Contractor to provide one (1) journeyman, tools, meters, instruments and other test equipment required by Architect. Contractor to remove and replace trims, covers, fixtures, etc., for Architect to review and test materials, systems, methods and workmanship. (Example: Removing switchboard and panel covers to take voltage/amp readings, review connections and wire size, etc.)

END OF SECTION

SECTION 26 12 00
WIRES AND CABLES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all wires and cables as herein specified and shown on the associated drawings.

1.02 QUALITY ASSURANCE

- A. All wire and cable shall conform to Code and shall meet all ASTM specifications.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Copper: Insulated type "THHN/THWN", soft drawn stranded copper. Minimum conductor size shall be No. 12 unless otherwise noted.
- B. Aluminum: Not allowed.
- C. Metal Clad Cable: In accessible spaces only.
- D. Low Voltage: As recommended by manufacturers of fire alarm, clock, intercom, paging and sound systems with 25-percent spare capacity and maximum voltage drop of 10-percent and code grade insulation required.
- E. All Other Cables: Not allowed.

2.02 COLOR CODE

- A. All wire shall be fully colored in sizes 12 and 10. For size 8 and large, color banded at each end and at all junction and pull boxes.
- B. Color Code throughout the project shall be:
 - 1. 480Y/277V System
 - Phase A Brown
 - Phase B Orange
 - Phase C Yellow
 - Neutral Grey
 - Equipment Ground Green
 - 2. 208Y/120V System
 - Phase A Black
 - Phase B Red
 - Phase C Blue
 - Neutral White
 - Equipment Ground Green

PART 3 - EXECUTION

3.01 SPLICES AND TERMINATIONS

- A. Splices are to be made up complete promptly after wire installation. Single wire pigtails shall be provided for fixture and device connections. Wirenuts may be used for fixture wire connections to single wire circuit conductor pigtails.

SECTION 26 12 00
WIRES AND CABLES

- B. Splices shall utilize Scotch "Hyflex" or "Ideal" wing nut connector installed properly. Splices for No. 8 and larger wires shall be made with mechanically applied pressure type connectors. All taped joints shall be with "Scotch 33+" or equal, applied in half-lap layers without stretching to deform.
- C. Insulation shall be removed with a stripping tool designed specifically for that purpose. A pocket knife is not an acceptable tool. All conductors shall be left nick-free.
- D. Thermoplastic insulated wire and cable shall not be installed or handled in temperatures below +14 degrees F (-10 C). Cross-linked polyethylene insulated wire and cable may be installed to -40 degrees F (-40 C).

END OF SECTION

SECTION 26 13 00
RACEWAYS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all raceways, wireways and associated fittings sized according to NEC, minimum size of power conduits shall be 0.5-inch and minimum size of communication conduits shall be 0.75-inch.

1.02 APPLICATION

- A. Electric metallic tubing (EMT), galvanized rigid conduit (GRC), flexible metal conduit, PVC conduit, and metal clad cable may be used.
- B. Schedule 40 PVC conduits may only be used below grade buried minimum of 24 inches below finished grade (36 inches below grade for utility service conduits), in slabs penetrating less than 20% of the thickness of the slab with 2" cover on all sides or inside block walls filled grout and minimum of 2" cover on all sides. Otherwise PVC may not be used above grade.
- C. GRC shall be used in locations subject to mechanical injury up to 8 feet, at building penetrations within 3 feet of concrete slab, at vault penetrations and site 90-degree ells.
- D. EMT may be used only in dry and protected locations inside walls, above accessible ceilings and where exposed above 8 feet above floor.
- E. Flexible metal conduit will be permitted only where flexibility is necessary: Connections to recessed light fixtures and final 18-inches of connection to all equipment subject to movement or vibration such as motors and transformers.
- F. Fiberglass conduits may be provided for 4 inch ells in underground installations for service utility raceways in lieu of rigid galvanized steel conduits.
- G. Surface Raceways: Metallic surface raceways of two compartments with divider for communications and power outlets. Wiremold G-4000 Series or approved.
- H. Floor Trench: Underfloor trench cellular raceway system with three separate compartments for power, voice and data. Provide activation kits every 8 feet each with two duplex receptacles, communication outlet mounting supports, die-cast aluminum trim ring, carpet inlay plate, flip cover and header junction box at end for pulling cables. Wiremold Walkercell Cellular Raceway System WRCR3/PK325/PKER-X/RAKMII.
- I. Drawing notes requiring a specific type of raceway shall take precedence over the specifications.
- J. Electrical wiring shall be in U.L. approved raceways and enclosures throughout.

FLOOR TRENCH:

PART 2 - PRODUCTS

2.01 FITTINGS

- A. GRC shall be coupled and terminated with threaded fittings. Ends shall be bushed with insulating bushings equal to T&B 200 series.

SECTION 26 13 00
RACEWAYS

- B. Connectors and couplings for EMT shall be steel concrete tight set screw type with insulated throats on connectors. Connectors larger than 1-1/4 inch shall be T&B 200 series insulating bushing.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Provide pull boxes where shown or required to limit the number of bends in any run to not more than three 90 degree bends. Use code gauge galvanized sheet steel boxes of code required size with removable covers, installed so that covers will be accessible after work is completed. Identify with permanent marker the system and panel circuiting if applicable, i.e. "TV", "EXT BLDG LTGS 4S-12", "RECP 2C5-16", "LTGS 4K-1", etc.
- B. Conceal all wiring in finished spaces. Exposed raceways are not allowed. All conduits shall be parallel to structural lines.
- C. Support suspended feeder conduits by metal ring or trapeze hangers with threaded steel rods. If a large number of suspended feeders are grouped together, the contractor shall review the layout with the structural engineer and obtain approval for the proposed layout. Wire hangers are not allowed.
- D. Conduit shall be adequately braced as required for Seismic Zone 3 installations per the SMACNA Seismic Restraint Manual, latest edition.
- E. Expansion Joints:
 - 1. All conduits crossing expansion joints where cast in concrete shall be provided with expansion-deflection fittings, equivalent to OZ/Gedney AXDX, installed per manufacturers recommendations.
 - 2. All conduits three inches and larger where not cast in concrete shall be rigidly secured to the building structure on opposite sides of a building expansion joint with an expansion-deflection fitting across the joint, equivalent to OZ/Gedney AXDX, installed per manufacturer's recommendations.
 - 3. All conduits less than three inches where not cast in concrete shall be provided with junction boxes securely fastened on both sides of the expansion joint, connected together with 15 inches of slack (a minimum of 15 inches longer than the straight line length) flexible conduit and copper green ground bonding jumper. In lieu of this flexible conduit, an expansion-deflection fitting, as indicated for conduits three inch and larger, may be installed.
- F. Seismic Joints:
 - 1. No conduits cast in concrete shall be allowed to cross a seismic joint.
 - 2. All conduits shall be provided with junction boxes securely fastened on both sides of the seismic joint, connected together with 15 inches of slack (a minimum of 15 inches longer than the straight line length) flexible conduit and copper green ground bonding jumper. Prior to installation, verify with Architect that the 15 inches is adequate for the designed movement, and if not, increase this length as required.
- G. Conduit stubbed from a concrete slab or wall to serve an outlet under a table or to supply a machine shall have a rigid conduit coupling flush with the surface of the slab. Provide plug where conduit is to be used in future.
- H. Provide a ground wire sized per code in all conduits. Conductor quantities indicated on drawings do not include ground wires unless otherwise noted.

SECTION 26 13 00
RACEWAYS

- I. Provide two pull string in all empty conduits.
- J. All conduit leaving building envelope (e.g. site lighting, roof mounted HVAC requirement, etc.) to be 0.75" minimum.

END OF SECTION

SECTION 26 14 00
SWITCHES AND RECEPTACLES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide all switches, receptacles, and other devices as herein specified and shown on the associated drawings.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Arrow-Hart, Pass & Seymour, Leviton and Hubbell are acceptable.

2.02 MATERIALS

- A. The following list of wiring devices covers the most commonly specified items and establishes the grade of device. Should the Drawings indicate a device other than those listed herein without reference to catalog number, such device shall be of the same grade and manufacturer as like devices.

Single Pole Switches – 20 amp	Hubbell #1221
Duplex Receptacles - 20 amp	Hubbell #5362

All wiring devices and plates to be industrial specification grade. Receptacles shall be mounted vertically with the ground pin down unless otherwise noted.

- B. Devices in finish areas to be impact resistant nylon finish as selected by Architect. Finish plates for kitchen and toilets shall 302 stainless steel. Weatherproof finish plates shall be metallic and U.L. listed for “In-Use” applications.

PART 3 - EXECUTION

3.01 LABELING

- A. All device plates shall have labels identifying panel and circuit designation on face, black letters on clear background.

END OF SECTION

SECTION 26 72 00
FIRE ALARM SYSTEMS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Contractor shall furnish and install fire alarm devices, as specified herein and indicated on the drawings.
- B. Provide all signal initiating devices, audible and visual alarm devices, power supply, a wiring system, and all accessory devices required to provide a complete operating system.
- C. All components shall be compatible with the existing system.
- D. The system shall comply with the applicable provisions of the National Alarm Code (NFPA 72), Americans with Disabilities Act, and meet all requirements of the local authorities having jurisdiction. All equipment and devices shall be listed by the Underwriter's Laboratories, Inc., or approved by the Factory Mutual Laboratories.
- E. Add additional expansion components to the existing fire alarm panel and system as required to accommodate new initiating and warning devices which are being added to the system (detectors, call stations, strobes, horns, tamper switches, door holders, etc.)

1.02 SUBMITTALS

- A. Submit complete and descriptive shop drawings in accordance with Sections 01300 and 16050.
- B. Submit plans and specifications to the governing Building Official. Obtain his written acceptance of, and procure and pay for all permits for, the system prior to beginning work and ordering equipment. Send one set of approved drawings to Engineer.
- C. Submit Equipment, Installation, Operating and Maintenance Manuals and As-Installed drawings in accordance with Sections 01300 and 16050.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Fire Control Instruments 7200 Series per School Board Exemption..
- B. Arrange for the fire alarm system vendor to review the wiring and power supply capacity of the existing system. Increase the power supply capacity, signal circuit wire size, or add a remote power supply as needed to accomplish proper operation of the system.

2.02 Fire alarm system shall be microprocessor based analog addressable with integral keypad controls, power supplies, LCD display, battery charger, digital communicator, three remote annunciator panels (one at the front entrance, one in the custodial office and one location as determined by Owner), manual pull stations, photoelectric smoke detectors, heat detectors, air duct photoelectric smoke detectors with sampling tubes, sprinkler system flow switches, supervisory for sprinkler system devices, strobes, horn/strobes, vandalproof covers and capacity for 25-percent future growth

PART 3 - EXECUTION

3.01 WIRING

- A. Furnish and install all required wiring in accordance with local and National codes.

SECTION 26 72 00
FIRE ALARM SYSTEMS

- B. Unless otherwise specified, minimum wire size shall be 16 gauge for audible alarm circuits, and 18 gauge for signal initiating circuits. All wiring shall be in plenum rated or totally enclosed in conduit. Conduit shall be sized by the manufacturer with 25 percent spare and voltage drop of 10 percent.
- C. Confirm that the existing power supply and circuiting have sufficient capacity to handle additional horns and strobes. If insufficient capacity exists, add additional components to resolve the problem. This might include such items as replacing existing signal circuits with larger wire or replacing power supplies. All signal devices must operate properly at completion.

3.02 FIELD QUALITY CONTROL

- A. A factory trained representative of the manufacturer shall supervise the final testing of the system and it shall be subject to the approval and acceptance of the responsible Architect. On completion of the acceptance tests, the Owner or his representative shall be instructed in the operation and testing of the system.
- B. The equipment manufacturer shall be represented by a local service organization and the name of this organization shall be furnished to the Architect and Owner.

END OF SECTION