

PARTIAL REMODEL
KELLEY ENGINEERING CENTER
OREGON STATE UNIVERSITY

SPECIFICATIONS

ISSUED FOR PERMIT AND BID

JULY 27, 2023

COMPILED WITH ADDENDUM 1
(09/06/2023)



INTEGRUS
A COLLABORATION OF YGH & INTEGRUS ARCHITECTURE

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SECTION 01 11 00**SUMMARY OF WORK****PART 1 GENERAL****1.01 SUMMARY OF WORK**

- A. The Work Contract consists of a Minor Remodel of the 2nd floor of the Kelley Engineering Building on the Oregon State University Campus, Corvallis, Oregon.
- B. Work shall be started within ten (10) calendar days after signing of Contract on behalf of Oregon State University. The Contract may not be signed prior to approval of the Contractor's Certificate of Insurance by Construction Contract Administration (CCA), Oregon State University. **Substantial Completion is expected to be January 19, 2024.**

1.02 CONTRACTORS USE OF PREMISES

- A. Contractor shall limit use of the Premises for work and storage to allow for:
 - 1. Owner occupancy, day and night.
 - 2. Public use, day and night.
 - 3. Security.
 - 4. Safe entry and exit for vehicles and pedestrians.
 - 5. Fire egress.
- B. Coordinate all operations with the Owner's Authorized Representative during the construction period. A 96-hour notification is required prior to scheduled utility shutdowns or street closures, but more lead time is often required to schedule around other critical activities.
- C. Limit Contractor's employee parking to locations designated at the Pre-construction Conference.

1.03 OWNER OCCUPANCY

- A. The Owner will occupy the Premises during the entire period of construction for the conduct of normal operations. Cooperate with Owner's Authorized Representative in construction operations to minimize conflict and to facilitate the Owner's usage especially in the following areas:
 - 1. Restricted access and parking.
 - 2. Use of stairs.
 - 3. Storage space availability.
- B. Conduct operations in such a way to ensure the least inconvenience to the general public, including:
 - 1. Limitations and easements.
 - 2. Emergency vehicle access.
 - 3. Building access to the public, day and night.

1.04 ASBESTOS AND OTHER HAZARDOUS MATERIAL

- A. The Owner has made a reasonable attempt to locate and identify asbestos or other hazardous material that may be encountered during the course of the Work.
- B. If the Contractor observes or suspects the existence of asbestos, polychlorinated biphenyl (PCB) or other hazardous materials in the structure or components of the building, the Contractor shall immediately stop work and notify the Owner's Authorized Representative.
- C. The Owner will arrange for the removal of asbestos, polychlorinated biphenyl (PCB) or other hazardous materials as required by Facilities Services personnel or by separate contract.
- D. Schedule ten (10) days of slack or "down" time for the removal of hazardous materials without penalty to Owner for the delay of the Contract.

1.05 LEAD BASED PAINT

- A. The Owner may have tested existing paint in the project area and if levels are found the following conditions apply.
- B. Contractor shall remove paint as specified for surface preparation and capture removed material for disposal.
- C. Contractor shall follow OSHA guidelines involving exposure to workers.
- D. Owner will provide containers for Contractor's use at project site.
- E. Contractor shall comply with the requirements of DEQ and EPA and shall submit a lead abatement plan.
- F. Contractor shall separate lead contaminated material from effluent and water.
- G. Owner will dispose of lead paint and effluent resulting from stripping operation.
- H. Soil contaminated by stripping operations shall be replaced with topsoil.

END OF SECTION

SECTION 01 24 76**APPLICATIONS FOR PAYMENT****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Work of this Section includes forms and procedures for progress payments.
- B. Related work specified elsewhere.
 - 1. For the primary discussion of payments, refer to OSU General Conditions, Section E, as supplemented.
 - 2. In compliance with OSU General Conditions, Section K, no payments beyond 75% will be made by the Owner before draft Operation and Maintenance Manuals have been received for review by the Owner.

1.02 APPLICATION FORMS

- A. For applications for payment, use sample Contract Payment Request (see below), contract payment request on company letterhead, or AIA Document G702, supported by AIA Document G703, Continuation Sheet, or similar document.
- B. Prepare the Schedule of Values in such a manner that each major item of Work and each subcontracted item of Work is shown as a line item broken down in terms of material and labor costs on AIA Document G703, Application Certification of Payment, Continuation Sheet or similar format. The sample continuation sheet shall be the minimum Schedule of Values breakdown.
- C. The Schedule of Values shall be submitted for review by the Owner prior to the first application for payment; and may be used when, and only when, accepted in writing by the Owner.
- D. Payment request is to include the Contractor's Federal Tax Identification number and return address.

1.03 PAYMENTS

- A. The Owner will make progress payments on account of the Contract once monthly for the scheduled duration of the project (i.e. three (3) payments on a three-month project), based on the value of work accomplished or materials on the job site, as stated in the Schedule of Values on the Application and Certificate Payment.
- B. Complete and forward Application to the Owner on or about the 15th day of each month for work performed the previous month and include certified payroll statements as specified in the OSU General Conditions.
- C. Submit one (1) copy of forms requesting payment to the Owner.
- D. Payments will be made on protected materials on hand at the job site properly stored,

protected, and insured.

- E. Estimated quantities shall be subject to the Owner's review and judgment.

1.04 EARLY PURCHASE AND PAYMENT OF MATERIALS AND EQUIPMENT

- A. Order materials and equipment requiring a long lead or waiting time early so as not to delay progress of the Work.
- B. The Contractor will be reimbursed for early order materials or equipment upon receipt and verification of quality and quantity against submittals and shipping documents by the Owner's Authorized Representative.
- C. Receipt shall be to the job site or stored at Owner's other premises in an orderly and safe manner, secured from normal weather damage.
- D. Security remains the responsibility of the Contractor.

END OF SECTION

CONTRACT PAYMENT REQUEST

DATE: _____

TO: University Financial Services
Oregon State University
850 SW 35th St.
Corvallis, OR 97333
FacServContracts@oregonstate.edu

Payment Request No. _____ Contract No. _____ Period from _____ to _____

Project: _____

Original Contract Amount \$ _____

Change Orders (Net Amount)..... \$ _____

Contract Total to Date \$ _____

=====

Total Completed and Stored to Date \$ _____

Less Retainage (5%), if applicable \$ _____

Total Earned, Less Retainage (if applicable)..... \$ _____

Less Previous Payments..... \$ _____

Net Amount Due this Request..... \$ _____

The undersigned Contractor certifies that, to the best of his/her knowledge, information, and belief, the Work covered by this request has been completed in accordance with the Contract Documents, that all amounts have been paid for Work for which previous applications for Payment were issued and payments received from the Owner, and that the amount shown herein is now due.

Contractor: _____

By: _____ **Date:** _____

Federal Tax ID Number: _____

Address: _____

CONTINUATION SHEET

Project Name: _____
Application No.: _____
Date: _____
Period To: _____
WRN No.: _____

NOTES:

Amounts are stated to the nearest penny.
 Use Column I on Contracts where variable retainage for line items may apply, or if retainage is required.
 Change Orders are usually listed as the last items of the basic schedule.

A	B	C	D	E	F	G		H	I
Item No.	Description of work	Scheduled Value	Work Completed		Materials Presently Stored (Not in D or E)	TOTAL Completed & Stored (D+E+F)	% Completed (G/C)	Balance to Finish (C-G)	Retainage
			From Previous Applications	This Period					
TOTALS									

SECTION 01 25 00**PRODUCT SUBSTITUTION PROCEDURES****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. General requirements for the Work in relation to substitutions and product options.
- B. Submit to the Owner's property insurance carrier shop drawings, samples, and product data (such as manufacturer's standard schematic drawings and other literature) when required by individual Specifications sections.
- C. Related Work Specified Elsewhere
 - 1. Invitation to Bid.
 - 2. OSU General Conditions.

1.02 REQUESTS FOR SUBSTITUTIONS

- A. Requests for substitution of products in place of those specified shall be in accordance with Invitation to Bid, and as specified herein.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Investigate proposed products and determine that they are equal or superior in all respects to products specified.
- B. Provide same guarantee for accepted substitutions as for products specified.
- C. Coordinate installation of accepted substitutions into the Work, making such changes as may be required for the Work to be complete in all respects.

1.04 SUBSTITUTIONS DURING BIDDING

- A. Submit one electronic copy of the following information with each request to the Owner:
 - 1. Substitution request form provided below.
 - 2. Comparison of proposed substitution with product, material or system specified.
 - 3. Complete data, substantiating compliance of proposed substitution with the Contract Documents.
 - 4. Test numbers and supporting reports, indicating compliance with referenced standards.
 - 5. Evidence that warranty requirements are acceptable.
 - 6. Details indicating specific deviations proposed for the substitution.
 - 7. Reference and applicable Specification sections.
 - 8. Applicable product samples.
- B. All substitution requests shall be received in the Owner's office prior to the deadline for questions as identified in the Invitation to Bid. Requests received after this date

will not be considered.

1.05 SUBSTITUTIONS DURING CONSTRUCTION

- A. Substitutions will normally not be considered after date of Contract except when required due to unforeseen circumstances.
- B. Within a period of thirty (30) days after date of Contract, the Owner may, at its option, consider formal written requests for substitution of products in place of those specified, when submitted in accordance with the requirements stipulated herein.
- C. One or more of the following conditions must be documented in any such request:
 - 1. Required for compliance with final interpretation of code or insurance requirements.
 - 2. Required due to unavailability of a specified product.
 - 3. Required because of the inability of the specified product to perform properly or to fit in the designated space.
 - 4. Substitution would be substantially in the best interest of the Owner in terms of cost, time, or other considerations.

1.06 SUBSTITUTIONS NOT PERMITTED

- A. If implied on submittals without first requesting approval thereof.
- B. If acceptance will require substantial revision of the Contract Documents.

END OF SECTION

SUBSTITUTION REQUEST FORM

TO: _____

PROJECT: _____

SPECIFIED ITEM:

Section	Page	Paragraph	Description
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The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION: _____

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes description of changes to Contract Documents which proposed substitution will require for its proper installation.

The undersigned states that the following paragraphs, unless modified on attachments, are correct:

1. The proposed substitution does not affect dimensions shown on Drawings.
2. The undersigned will pay for changes to the building design, including engineering design, detailing and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse effect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.

The undersigned further states that the function, appearance and quality of the Proposed Substitution are equivalent or superior to the Specified Item.

Submitted by:

Signature _____

Firm _____

Address _____

Date _____

Telephone _____

For use by Design Consultant:

Accepted Accepted as noted

Not Accepted Received too late

By _____

Date _____

Remarks _____

Attachments:

SECTION 01 31 19**PROJECT MEETINGS****PART 1 GENERAL****1.01 PRE-CONSTRUCTION MEETING**

- A. Architect/Engineer/Designer, Contractor and Owner will meet prior to start of the Work (within seven (7) days after notice to proceed) to discuss at least the following topics and any others of mutual interest.
1. Schedule of Values
 2. Permit Status/tree protection/erosion control
 3. List of sub-contractors
 4. Job inspections.
 5. Early purchase of, and/or lead time requirements for material and equipment/repurchase of equipment
 6. Monthly payment date/SOP for pay requests
 7. Portion of site to be occupied by construction.
 8. Parking/Staging areas
 9. Non-smoking campus requirements
 10. Maintenance of access and safety.
 11. Processing of field decisions and change orders
 12. Labor provisions/labor rates for subs
 13. Material submittals/deferred submittals
 14. Owner access during construction.
 15. Review of Contract Documents/review ADA requirements/cross-slopes
 16. Coordination procedures and separate contracts.
 17. Progress schedules.
 18. Critical Work sequencing.
 19. Safety and emergency procedures/24 hour contact numbers
 20. Security procedures.
 21. Hazardous materials.
 22. Progress meetings.
 23. Contract close-out.
- B. Location of Meeting: Project site

1.02 PROGRESS MEETINGS

- A. The Contractor will schedule and administer progress meetings and will:
1. Prepare agendas.
 2. Schedule progress meetings, frequency, time and day to be determined during pre-construction meeting.
 3. Make physical arrangements for and preside at meetings.
 4. Record minutes and include decisions.

5. Distribute copies of minutes to participants within four (4) days after meetings.
- B. Location of Meetings: Project site.
- C. Attendance:
1. The Owner or Owner's Authorized Representative.
 2. Contractor.
 3. Subcontractors affected by agenda.
 4. Project Architect/Engineer/as necessary.
 5. Owner will attend meeting to ascertain Work is expedited consistent with progress schedule and with Contract Documents.
- D. Minimum Agenda:
1. Review and approve minutes from previous meeting.
 2. Review Work progress since previous meeting.
 3. Discuss field observations, and problems.
 4. Review delivery schedules, construction schedule, and identify problems which impede planned progress.
 5. Review proposed changes.
 6. Material submittals.
 7. Note all new subcontractors performing Work at the job site.

END OF SECTION

SECTION 01 33 23**SHOP DRAWINGS, PRODUCT DATA, SAMPLES****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Submit to the Owner shop drawings, samples, and product data (such as manufacturer's standard schematic drawings and other literature) when required by individual Specifications sections.
- B. Related Work Specified Elsewhere
 - 1. OSU General Conditions.

1.02 SUBMITTAL SCHEDULING

- A. For items requiring review by the Owner only, submittals shall be sent to the Owner at least 15 calendar days before the date each is required for fabrication or installation.
- B. Submittals to be reviewed by Owner's consultants shall be sent to the Owner at least 20 calendar days before the date each is required for fabrication or installation.
- C. Submittals to be reviewed by Owner's property insurance carrier shall be sent to Owner as directed in individual specification sections.
- D. Submittals involving Substitution requests or other modifications requiring review by the Owner and/or the Owner's consultants shall be sent to the Owner at least 20 calendar days before the date each is required for fabrication or installation.

1.03 SUBMITTAL CONTENT AND FORMAT

- A. General Requirements:
 - 1. Shop Drawings: Submit in electronic format and, if requested by Owner's Authorized Representative, submit one reproducible transparency and 1 print of each drawing.
 - 2. Product Data: Submit electronically, and if requested by Owner's Authorized Representative, up to 6 hard copies.
 - 3. Samples: Submit the number and type stated in each Specification Section. Submit a minimum of three sets of color samples where color selection is required.
 - 4. Submittals shall include:
 - a. Date and revision dates return date requested.
 - b. Project title and number.
 - c. The names of the Contractor, subcontractor, supplier, and manufacturer.
 - d. Identification of product or material, with Specification Section number.
 - e. Relation to adjacent critical features of work or materials.
 - f. Field dimensions, clearly identified as such.

- g. Applicable standards, such as ASTM number or Federal Specification.
 - h. Identification of deviations from Contract Documents, and for products accompanied by Substitution request as required by Section 01 25 00.
 - i. Contractor's stamp legibly signed, essentially as follows:
 - 1) The undersigned, acting on behalf of the Contractor, certifies that this submittal has been reviewed and is approved; products have been verified as being as specified, field measurements and field construction criteria have been or will be coordinated, and the submittal is in compliance with Contract Documents.
5. Re-submission Requirements:
- a. Revise initial drawings as required and resubmit as specified for initial submittal.
 - b. Indicate on drawings any changes which have been made other than those requested by the Owner or the owner's consultants.
6. The Owner may return without review any submittal not meeting the requirements listed above.
- B. Shop Drawings:
1. Present data in a clear and thorough manner.
 2. Details shall be identified by reference to sheet and detail, schedule or room numbers shown on Contract Documents.
 3. Structural items shall be identified by location in the completed structure. Identify details by reference to contract sheet and detail numbers.
 4. Minimum sheet Size: 8 ½ x 11".
- C. Product Data:
1. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data:
 - a. Clearly mark each copy to identify pertinent product or models.
 - b. Show dimensions, weights, and clearances required.
 - c. Show performance data consisting of capabilities, ROM, KW, pressure drops, design characteristics and consumption; conforming as closely as possible to the test methods referenced in the Plans and Specifications.
 - d. Show wiring or piping diagrams and controls.
 2. Manufacturer's standard schematic drawings and diagrams:
 - a. Modify to delete information which is not applicable.
 - b. Supplement standard information to provide information specifically applicable to the Work.
- D. Samples:
1. Insure that samples are of sufficient size to indicate the general visual effect or color.
 2. Where samples must show a range of color, texture, finish, graining, or other property, submit sets of pairs illustrating the full scope of this range.

3. One (1) sample or one (1) set of approved samples will be retained by the Owner; final work will be measured against approved samples.

1.04 QUALITY ASSURANCE

- A. Process submittals in ample time for review, as applicable, so as to not delay the Work. All submittals shall be received by the Owner within ten (10) days after pre-construction.

1.05 DEFINITIONS

- A. The Owner will mark reviewed materials as follows:
 1. "No Exception Taken," which means fabrication, manufacture and/or installation may proceed.
 2. "Make Revisions Noted," which means fabrication, manufacture and/or installation may proceed with revisions as noted.
 3. "Revise and Resubmit," which means that fabrication, manufacture and/or installation may not proceed.
 4. "Rejected," which means do not proceed; make arrangements for the review of the proposed Work with the Owner as soon as possible.

1.06 PROCESSING

- A. Review submittals, make necessary corrections, and become familiar with the content of the submittals.
- B. Mark each item with Contractor's stamp.
- C. Accompany submittals with a transmittal letter bearing the project name, Contractor's name, number of items, and other pertinent data.
- D. Keep one copy of each reviewed submittal on the job site at all times.
- E. Be responsible for obtaining and distributing prints of shop drawings to the various suppliers, and the Owner once review process has been completed. Make prints of reviewed shop drawings only from transparencies which carry the appropriate stamp and endorsement.

END OF SECTION

SECTION 01 42 13**ABBREVIATIONS AND SYMBOLS****PART 1 GENERAL****1.01 REQUIREMENTS INCLUDED**

- A. Words which may be found elsewhere in the Project Manual and Drawings are abbreviated in accordance with the standards set forth in the following table:

A/C	air conditioning	CEM	cement
AB	anchor bolt	CF	cubic foot
AC	asphaltic concrete	CFOI	contractor furnished owner installed
ACT	acoustical tile	CG	corner guard
AD	area drain	CH	ceiling height
ADD	addendum	CI	cast iron
ADD'L	additional	CJ	control joint
ADH	adhesive	CKBD	chalkboard
AFF	above finish floor	CL	centerline
AGG	aggregate	CLG	ceiling
AL	aluminum	CLR	clear(ance)
ALLOW	allowable	CM	construction manager
ALT	alternate	CMT	ceramic mosaic (tile)
ANOD	anodized	CMU	concrete masonry unit
AP	access panel	COL	column
APPRX	approximate	COM	communications
ARCH	architect(ural)	CONC	concrete
ASPH	asphalt	CONN	connect(ion)
AUTO	automatic	CONST	construction
AVE	avenue	CONT	continuous or continue
		CONTR	contract(or)
BD	board	CPT	carpet
BIT	bituminous	CRS	course(s)
BLDG	building	CS	countersink
BLKG	blocking	CSMT	casement
BM	bench mark, beam(s)	CT	ceramic tile
BOT	bottom	CTR	center
BRZ	bronze	CVG	clear vertical grain
BS	both side	CW	cold water
		CWT	ceramic wall tile
CB	catch basin	CY	cubic yard

D	depth	FA	fire alarm
DEMO	demolish, demolition	FAF	fluid applied flooring
DEP	depressed	FARF	fluid applied resilient floor
DF	drinking fountain	FAS	fasten, fastener
DIA	diameter	FBD	fiberboard
DIAG	diagonal	FBT	finished blowing temperature
DIM	dimension	FD	floor drain, fire damper
DISP	dispenser	FE	fire extinguisher
DIV	division	FEC	fire extinguisher cabinet
DL	dead load	FF	factory finish
DMT	demountable	FGL	fiberglass
DN	down	FHMS	flathead machine screw
DP	dampproofing	FHWS	flathead wood screw
DR	door	FIN	finish(ed)
DS	downspout	FLCO	floor cleanout
DT	drain tile	FLR	floor(ing)
DTL	detail	FLUR	fluorescent
DW	dumbwaiter	FND	foundation
DWG	drawing(s)	FOC	face of concrete
DWR	drawer	FOIC	furnished by owner/installed by contractor
EA	each	FOIO	furnished by owner/installed by owner
EB	expansion bolt	FOM	face of masonry
EF	each face	FP	fireproofing, flash point
EJ	expansion joint	FPHB	freeze-proof hose bib
EL	elevation	FR	fire resistive, fire rated
ELEC	electric(al)	FRM	frame(d), (ing)
EMBED	embedment	FS	full size
EMER	emergency	FSS	finished structural slab
ENCL	enclose(ure)	FT	foot
EP	electrical panel board	FTG	footing
EQ	equal	FTS	finished topping slab
EQUIP	equipment	GA	gage, gauge
EST	estimate	GALV	galvanized
EVT	equiviscous temperature	GB	grab bar or gypsum board
EW	each way	GC	general contractor
EWC	electric water cooler	GI	galvanized iron
EX.EXIT	existing	GL	glass, glazing
EXH	exhaust	GLS	glass resin wall surfacing
EXP	exposed		
EXT	exterior		

GP	gypsum	LL	live load
HB	hose bib	LONGIT	longitudinal
HBD	hardboard	LP	low point
HC	hollow core	LW	lightweight
HD	heavy duty	MAX	maximum
HDR	header	MB	machine bolt
HDW	hardware	M. MECH	mechanic(al)
HM	hollow metal	MFR	manufacture(r)
HOR	horizontal	MH	manhole
HP	high point	Min	minimum, minute
HR	hour	MISC	miscellaneous
HT	height	MO	masonry opening
HTG	heating	MO#	model number
HVAC	heating, ventilating, air conditioning	MOD	modular
HWD	hardwood	MPH	miles per hour
HWH	hot water heater	MS	machine screw
ID	inside diameter, identification	MTL	metal
IN	inch	MULL	mullion
INCIN	incinerator	MWP	membrane waterproofing
INCL	include(d), ion	NAT	natural, natural finish
INT	interior	NIC	not in contract
INV	invert	NO	number
JB	junction box	NOM	nominal
JC	janitor's closet	NTS	not to scale
JT	joint	OA	overall
KD	kiln dried	OBS	obscure
KCP	Keene's cement plaster	OC	on center(s)
KO	knockout	OD	outside diameter
KP	kick plate	OF	overflow
LAB	laboratory	OFCI	owner furnished contractor installed
LAM	laminated	OFOI	owner furnished owner installed
LAV	lavatory	OHMS	ovalhead machine screw
LBS	pounds	OHWS	ovalhead wood screw
LH	left hand	OPG	opening
		OPP	opposite
		OZ	ounce(s)
		P	paint(ed)

PB	push button	SIM	similar
PCF	pounds per cubic foot	SL	sleeve
PCP	putting coat plaster	SOG	slab on grade
PERF	perforate(d)	SPEC	specification(s)
PL	plate, property line	SQ	square
PLAM	plastic laminate	SS	storm sewer
PLAS	plaster	S4S	finished 4 sides
PNL	panel	SD	storm drain
PP	push plate	ST	steel, street
PR	pair	ST ST	stainless steel
PREP	prepare	STD	standard
PSF	pounds per square foot	STR	structural
PSI	pounds per square inch	SUPP	supplement
PT	point, pressure treated	SUPT	support
PTN	partition	SUSP	suspended
PVC	polyvinyl chloride	SV	sheet vinyl
PWD	plywood		
		T	tread
QT	quarry tile	TBM	top bench mark
		T&G	tongue and groove
R	rise	TB	towel bar
RA	return air	TC	top of curb
RAD	radius	TEL	telephone
RCP	reflected ceiling plan	TEMP	tempered
RD	roof drain	THK	thickness
REF	reference	TKBD	tackboard
REFR	refrigerator	TO	top of
REINF	reinforce(ing)	TP	top of paving
REQ	required	TRANS	transverse
RET'G	retaining	TS	top of slab
REV	revision(s), revised	TV	television
RH	right hand	TW	top of wall
RM	room	TYP	typical
RO	rough opening		
RSF	resilient sheet flooring	UNO	unless noted otherwise
SC	solid core	VAT	vinyl asbestos tile
SCHED	schedule	VB	vapor barrier
SEC	section	VCT	Vinyl Composition Tile
SF	square feet (foot)	VERT	vertical
SHT	sheet	VG	vertical grain
SHTHG	sheathing	VIF	verify in field

VWC	vinyl wall covering	WP	waterproof(ing)
W	width, wide, water	WNS	wainscot
W/	with	WR	water resistant
W/O	without	WS	waterstop
WC	water closet	WW	window wall
WD	wood, wood finish	WWC	wood wall covering
		WWF	woven wire fabric

B. Words which may be found elsewhere in the Project Manual and Drawings are abbreviated in accordance with the standards set forth in the following table:

&	and
λ	angle
@	at
\varnothing	diameter, round
"	inches
:	is, shall b
'	feet
ζ	perpendicular
/	per
%	percent
#	pound, number
X	by (as in 2 by 4)

END OF SECTION

SECTION 01 42 16**DEFINITIONS****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Words which may be found elsewhere in the Contract Documents are defined in accordance with the standards set forth in the following table:

Approve:

Where used in conjunction with Architect's response to submittals, requests, applications, inquiries, reports and claims by Contractor, the meaning of term "approved" will be limited to the Architect's responsibilities and duties as specified in General and Supplementary Conditions. In no case will "approval" by Architect be interpreted as a release of Contract requirements.

As Detailed, As Shown:

Where "as detailed", "as shown" or words of similar importance are used, it shall be understood that reference to the Drawings accompanying the Specifications is made unless otherwise stated.

As Directed, As Required, As Authorized, As Reviewed, As Accepted:

Where "as directed", "as required", "as authorized", "as reviewed", "as accepted" or words of similar importance are used, it shall be understood that the direction, requirement, permission, authorization, review, or acceptance of the Architect is intended, unless otherwise stated.

As Indicated:

Where "as indicated" is used it shall be understood that reference to Drawings and/or Specifications is made unless otherwise stated.

Directed, Requested, etc.:

Terms such as "directed," "requested," "authorized," "selected," will be understood as "directed by Architect," "requested by Architect," and similar phrases shall not be interpreted to extend Architect's responsibility into Contractor's responsibility for construction supervision.

Furnish:

Except as otherwise defined in greater detail the term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.

Indicated:

The term "indicated" is a cross-reference to graphic representations, notes or schedules on drawings, to other paragraphs or schedules in the specifications and to similar means of recording requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping reader locate cross-reference and no limitation of location is intended except as specifically noted.

Install:

Except as otherwise defined in greater detail, the term "install" is used to describe operations at project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable in each instance.

Installer:

The term "installer" is defined as the entity (person or firm) engaged by Contractor, or its subcontractor or sub-subcontractor for performance of a particular unit of Work at project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (Installers) be expert in operations they are engaged to perform.

Provide:

Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.

END OF SECTION

SECTION 01 42 19**REFERENCE STANDARDS****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Quality Assurance.
- B. Location of References.
- C. Schedule of References.

1.02 QUALITY ASSURANCE

- A. For products or quality of work specified by association, trade, or federal standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents.
- C. General Applicability of Standards: Except where Contract Documents include more stringent requirements, applicable standards of the construction industry have the same force and effect as if bound or copied directly into Contract Documents.
- D. Such standards are made a part of the Contract Documents by reference.
- E. Individual sections indicate which codes and standards the Contractor must keep at the project site, available for reference.
- F. Referenced industry standards take precedence over standards which are not referenced but recognized in industry as applicable.
- G. Non-referenced standards are not directly applicable to the Work, except as a general requirement of whether the Work complies with standards recognized in the construction industry.

1.03 LOCATION OF REFERENCES

- A. Valley Library, Oregon State University.

1.04 SCHEDULE OF REFERENCED ASSOCIATIONS

AIA	American Institute of Architects WWW.AIA.ORG
AISC	American Institute of Steel Construction WWW.AISC.ORG
AISI	American Iron and Steel Institute WWW.STEEL.ORG
ANSI	American National Standards Institute WWW.ANSI.ORG
APA	American Plywood Association WWW.APAWOOD.ORG
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers WWW.ASHRAE.ORG
ASTM	American Society for Testing and Materials WWW.ASTM.ORG
AWPA	American Wood Protection Association WWW.AWPA.COM
AWS	American Welding Society WWW.AWS.ORG
BIA	Masonry Institute of America WWW.MASONRYINSTITUTE.ORG
BOLI	Oregon Bureau of Labor and Industries WWW.BOLI.STATE.OR.US
CCB	Construction Contractors Board WWW.OREGON.GOV.CCB/
CDA	Copper Development Association WWW.COPPER.ORG
CISPI	Cast Iron Soil Pipe Institute WWW.CISPI.ORG
CSI	Construction Specification Institute WWW.CSINET.ORG

DEQ	Department of Environmental Quality (Oregon) WWW.OREGON.GOV/DEQ/
DHI	Door and Hardware Institute WWW.DHI.ORG
DOT	Department of Transportation WWW.DOT.GOV
EPA	U.S. Environmental Protection Agency WWW.EPA.GOV
FM	Factory Mutual System WWW.FMGLOBAL.COM
FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WFSIS) WWW.GSA.GOV/PORTAL/CONTENT/103856
IBC	International Building Code WWW.ICCSAFE.ORG
ICBO	International Conference of Building Officials PUBLICECODES.CITATION.COM/ICOD/IBG/INDEX.HTM
IRS	Internal Revenue Service WWW.IRS.GOV
ISA	Instrumentation Systems and Automation Society WWW.ISA.ORG
NAAMM	National Association of Architectural Metal Manufacturers WWW.NAAMM.ORG
NBFU	National Board of Fire Underwriters WWW.NFPA.ORG
NEC	National Electric Code WWW.NECPLUS.ORG
NEMA	National Electrical Manufacturers' Association WWW.NEMA.ORG
NESC	National Electrical Safety Code WWW.IEEE.ORG

NFPA	National Fire Protection Association WWW.NFPA.ORG
NRCA	National Roofing Contractors' Association WWW.NRCA.NET
OAR	Oregon Administrative Rules ARCWEB.SOS.STATE.OR.US/404.HTML
OESP	State of Oregon Electrical Specialty Code http://www.bcd.oregon.gov/programs/online_codes.html
ORS	Oregon Revised Statutes LANDRU.LEG.STATE.OR.US/ORS/
OSHA	Occupational Safety and Health Administration WWW.OSHA.GOV
OSSC	Oregon Structural Specialty Code http://www.bcd.oregon.gov/programs/online_codes.html
PS	Product Standard STANDARDS.GOV/STANDARDS.CFM
SDI	Steel Door Institute WWW.STEELDOOR.ORG
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association WWW.SMACNA.ORG
SPRI	Single Ply Roofing Institute WWW.SPRI.ORG
SSPC	Steel Structures Painting Council WWW.SSPC.ORG
SWRI	Sealing, Waterproofing and Restoration Institute WWW.SWIRONLINE.ORG
UBC	Uniform Building Code (See ICBO)
UFC	Uniform Fire Code WWW.NFPA.ORG
UL	Underwriters' Laboratories, Inc. WWW.UL.COM

UMC	Uniform Mechanical Code WWW.UBC.COM
UPC	Uniform Plumbing Code WWW.UBC.COM
WHL	Warnock Hersey Laboratories WWW.INTEK.COM/MARKS/WH/
WCLIB	West Coast Lumber Inspection Bureau WWW.WCLIB.ORG
WWPA	Western Wood Products Association WWW.WWPA.ORG

END OF SECTION

SECTION 01 45 00**QUALITY CONTROL****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Codes, regulations and permits.
- B. Procedures for quality control.

1.02 OWNER RESPONSIBILITIES

- A. Owner will employ and pay for services of an independent testing laboratory to perform inspection, sampling and testing as required by local building authority.
- B. Owner's Authorized Representative will provide on-site observation during construction.

1.03 CODES, REGULATIONS AND PERMITS

- A. All Work shall conform with the Oregon Structural Specialty Code (OSSC) based on the International Building Code (IBC), as amended by the State of Oregon Building Codes Division and the edition designated by the governing authority.
- B. Contractor shall comply with all applicable state and local construction codes.
- C. References to codes, Specifications and standards referred to in the Contract Documents shall mean, and are intended to be, the latest edition, amendment or revision of such reference standard in effect as of the date of these Contract Documents.
- D. The Owner shall be responsible for all permits and City of Corvallis plan review fees; the Contractor shall be responsible for all licenses and associated fees required for the Project.
- E. Contractor shall arrange and attend all required permit inspections and furnish evidence of approved City inspection reports per Section 01 77 00.

1.04 QUALITY OF WORK

- A. It is the true and specific intent of these Specifications that quality of Work on all phases of the construction and embracing all the trade sections shall be of high quality performed by workers skilled in their trade and performing their Work only according to the standard of best practice of the trade.
- B. All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with manufacturer's directions unless otherwise specified.
- C. If Work is required in a manner to make it impossible to produce first quality Work, or should discrepancies appear among Contract Documents, request interpretation from

Architect before proceeding with Work.

- D. Failure to secure interpretation may cause rejection by Architect or owner of installation.

1.05 LAYOUT

- A. Be responsible for properly laying out the Work and for lines and measurements for the Work.
- B. Verify the figures shown on the drawings before laying out the Work and report errors or inaccuracies to the Architect before commencing Work.
- C. Strict compliance with maximum slopes is required. Accessible parking spaces and adjacent access aisles with slope exceeding 2% in any direction, as determined by OSU, shall be removed and replaced by the contractor at their expense.
- D. Strict compliance with maximum slopes is required. New sidewalks exceeding 1:20 slope or with cross slope exceeding 2%, as determined by OSU, shall be removed and replaced by the contractor at their expense. Ramps exceeding 1:16 slope or with cross slope exceeding 2%, as determined by OSU, shall be removed and replaced by the contractor at their expense.

1.06 SUPERVISION

- A. The Contractor shall maintain effective supervision on the project at all times Work is being performed.
- B. The superintendent shall be the same person throughout the project and shall attend the preconstruction conference.

1.07 INSPECTIONS AND TESTING

- A. Contractor shall notify the Owner at least twenty-four (24) hours in advance of any required progress inspection or final inspection including final punch list inspection.
- B. Cooperate with laboratory personnel, provide access to Work and furnish incidental equipment material and labor required for field testing and sample taking.

1.08 EVALUATION OF TESTS AND INSPECTIONS

- A. Results of laboratory and/or field control tests and inspections shall be the principal basis upon which satisfactory completion of Work shall be judged.
- B. If results of tests and inspections indicate Work is below requirements of Contract Documents, that portion of Work is subject to rejection.

1.09 ADJUSTMENTS

- A. Remove and replace Work so rejected at Contractor's expense including costs of subsequent tests and inspections until Work meets requirements of Contract Documents.

- B. The Owner reserves the right to perform any testing as may be required to determine compliance with the Contract Documents.
- C. Costs for such testing will be the Owner's responsibility unless testing indicates noncompliance. Cost for such testing indicating noncompliance shall be borne by the Contractor.
- D. Noncomplying Work shall be corrected and testing will be repeated until the Work complies with the Contract Documents.
- E. Contractor will pay costs for retesting noncomplying Work.

END OF SECTION

SECTION 01 51 00**CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction.
- B. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations", ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition".
- C. Electrical Service: Comply with NEMA, NEC and UL standards and regulations for temporary electric service; install service in compliance with National Electric Code (NFPA 70).
- D. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use; obtain required certifications and permits if required.

1.03 PROTECTION

- A. Protect sidewalks, asphalt paving, concrete, trees, shrubs, and lawn areas at all times from damage resulting from construction activities.
- B. Prevent materials from clogging catch basins and yard drains; leave drains clean and in proper working condition.
- C. Protect Existing Irrigation Systems:
 - 1. In the event damage occurs to an underground irrigation system as a direct result of a Contractor's activities, the Contractor shall repair/replace or be assessed a charge at the discretion of the Owner.
 - 2. If repairs are to be made by the Contractor, the repairs will be inspected by the Owner's Authorized Representative prior to backfilling.
 - 3. Any galvanized pipe that requires repair shall be repaired at a threaded coupling, not by use of a compression coupling.
- D. Protect Existing Air Handling Systems:
 - 1. Contractor shall be responsible for protection of the cleanliness of the existing air handling system at all times. This protection shall include:
 - a. During site work or building demolition, prefilters shall be provided and maintained on all building outside air intakes at all times throughout the construction duration.

- b. During any interior work that may create dust in the interior space and adjacent corridor/hallways, air filters shall be provided and maintained on all affected air return and exhaust grilles. Where air flow in or out of the space is not required, all air duct openings shall be temporarily blanked off with plywood or sheet metal.
 - c. Prior to starting any work, the Contractor shall record and submit to the Owner's Authorized Representative, pressure readings across all existing air handler air filter banks before installation of new prefilters.
 - d. Upon completion of all Work affecting existing air handling systems, the Contractor shall remove all temporary filters, covers and associated parts and restore the system to its original operating condition unless otherwise stated elsewhere in the Contract Documents
- E. Clean, repair, resurface, or restore existing surfaces to their original, or better, condition, or completely replace such surfaces to match existing, where damaged by construction operations.
- F. Security is the responsibility of the Contractor.
- G. Construction Debris:
- 1. Debris shall not be allowed to remain around the buildings during performance of Work, but shall be disposed of as rapidly as it accumulates.
 - 2. On completion of Work, the buildings and grounds shall be left in a condition that is equal to or better than original condition.
 - 3. In case of failure to do so, the Owner may remove rubbish and charge the cost to the Contractor.
- H. The Contractor shall manage a safe job environment for both the safety of all the people around the Work site as well as the safety of the Owner's and general public's property.
- I. The Contractor shall provide and maintain suitable barricades, shelters, lights, and danger signals during the progress of the Work; they shall meet the requirements of the local building code and OSHA.

1.04 DRAINAGE

- A. Verify that all rain drains in the construction areas are in working order and notify the Owner's Authorized Representative in writing of any rain drains that are plugged, prior to the start of the Work.
- B. Start of Work will be considered as acknowledgment that all drains are clear and in good working order.
- C. All drains shall be left in a clean and proper working condition.

1.05 CONSTRUCTION PROJECT SAFETY FORM

- A. Contractor shall submit to the Owner, prior to signing the Contract, the completed

"Construction Project Safety Form", which is provided with instructions at the end of this Section.

1.06 TEMPORARY UTILITIES

- A. Temporary Utilities:
 - 1. Prepare a schedule indicating dates for implementation and termination of each temporary utility.
 - 2. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of the permanent service.
- B. Conditions of Use:
 - 1. Keep temporary services and facilities clean and neat in appearance.
 - 2. Operate in a safe and efficient manner.
 - 3. Take necessary fire prevention measures.
 - 4. Do not overload facilities or permit them to interfere with progress.
 - 5. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.
- C. Electrical Service:
 - 1. Service limited to 20 amp 120V circuits will be paid for by the Owner.
 - 2. Connection to the service shall be the responsibility of the Contractor, with the Owner's approval.
 - 3. Coordinate with the Owner's Authorized Representative.
- D. Water Service:
 - 1. Service in reasonable quantities for the Project will be paid for by the Owner.
 - 2. Connection to the service shall be the responsibility of the Contractor, with the Owner's approval.
 - 3. Coordinate with the Owner's Authorized Representative.

1.07 TEMPORARY SUPPORT FACILITIES

- A. Temporary Sanitary Facilities:
 - 1. Provide and maintain an adequate number of facilities for the use of all persons employed on the Work during construction.
 - 2. Provide enclosed, weatherproof facilities with heat as required.
 - 3. Use of new or existing Owner's facilities will not be permitted.
- B. Temporary Heat and Ventilation:
 - 1. As necessary, provide temporary heat and ventilation required by construction activities, for curing or drying of completed installations or protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.

- C. Telephone Equipment: Provide telephone communications at project site.
- D. Existing Services:
 - 1. Do not interrupt any existing service.
 - 2. Prior request and approval of the Owner's Representative will enable the Owner to shut down any utility required by the Work.
 - 3. Contractor shall not shut down utilities.

1.08 TEMPORARY BARRIERS AND ENCLOSURES

- A. Provide barriers and fencing to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage.
- B. Provide Commercial grade chain link fence construction.
- C. Provide 6 foot high fence around construction site as directed by Owner's Authorized Representative; equip with vehicular and pedestrian gates with lock.
- D. Exterior Closures: Provide temporary secured, weather-tight closures at exterior openings, to permit acceptable working conditions and protection of the Work.
- E. Interior Closures:
 - 1. Provide temporary floor to ceiling partitions (not plastic sheeting) and ceilings as required to separate work areas from Owner occupied areas, to prevent penetration of dust and moisture into Owner occupied areas, to reduce construction noise, and to prevent damage to existing materials and equipment.
 - 2. Paint surfaces exposed to view from Owner occupied areas.

1.09 ODORS

- A. Work that causes excessive odors shall be performed only after coordination with the Owner's Authorized Representative. Filtering of air intakes to units may be required to prevent odors and vapors from entering the buildings.
- B. Contractor shall provide 7 days advance notice to the Owner's Authorized Representative in order for advance notice to be forwarded to building occupants. Work stoppage may occur if advance notification has not been coordinated or odors and vapors from the work are found to generate complaints from building occupants.

1.10 FIRE SAFETY

- A. Ensure that required exit routes remain unobstructed while building is occupied.
- B. Abide by all fire safety requirements for buildings under construction, alteration or demolition as required by Article 87, of the Uniform Fire Code as adopted by the State of Oregon.
- C. An emergency telephone shall be provided on site. Cellular telephone equipment is acceptable.
- D. Fire Suppression Equipment:

1. Install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers", and NFPA 241 "Standard for Safeguarding Construction, Alterations and Demolition Operations".
2. Maintain equipment in working condition with current inspection certificate attached to each.
3. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
4. Store combustible materials in containers in fire-safe locations.
5. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways, and other access routes for fighting fires.
- 6.
6. Provide continual supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.
7. When possible, relocate hot work to a designated hot work area.
8. If the materials or equipment cannot be relocated to a designated hot work area, use the least hazardous form of hot work that will get the job done and prepare the area properly.
9. Manage mobile hot work using the formal hot work permit system. (mentioned in the next bullet point and also a directive in the OSU Hot Work Safety Program)
10. Make sure both fire protection and hot work equipment work properly.
11. Train all personnel involved in hot work operations and activities so that they have the understanding, knowledge, and skills necessary to safely perform their jobs.

1.11 CONSTRUCTION AIDS

- A. Scaffolding: comply with applicable OSHA requirements.
- B. Material Handling Equipment:
 1. Provide necessary cranes, hoists, towers, or other lifting devices.
 2. Use only experienced operators.
 3. Remove equipment as soon as possible after task is ended.
 4. Coordinate placement of such equipment with Owner's Authorized Representative.
 5. Obtain required permits and meet requirement of governing authorities regarding applicable regulations.
- C. Materials or debris shall not be allowed to free fall from building.
- D. The use of chutes or conveyors must be approved by Owner.

1.12 TEMPORARY CONTROLS

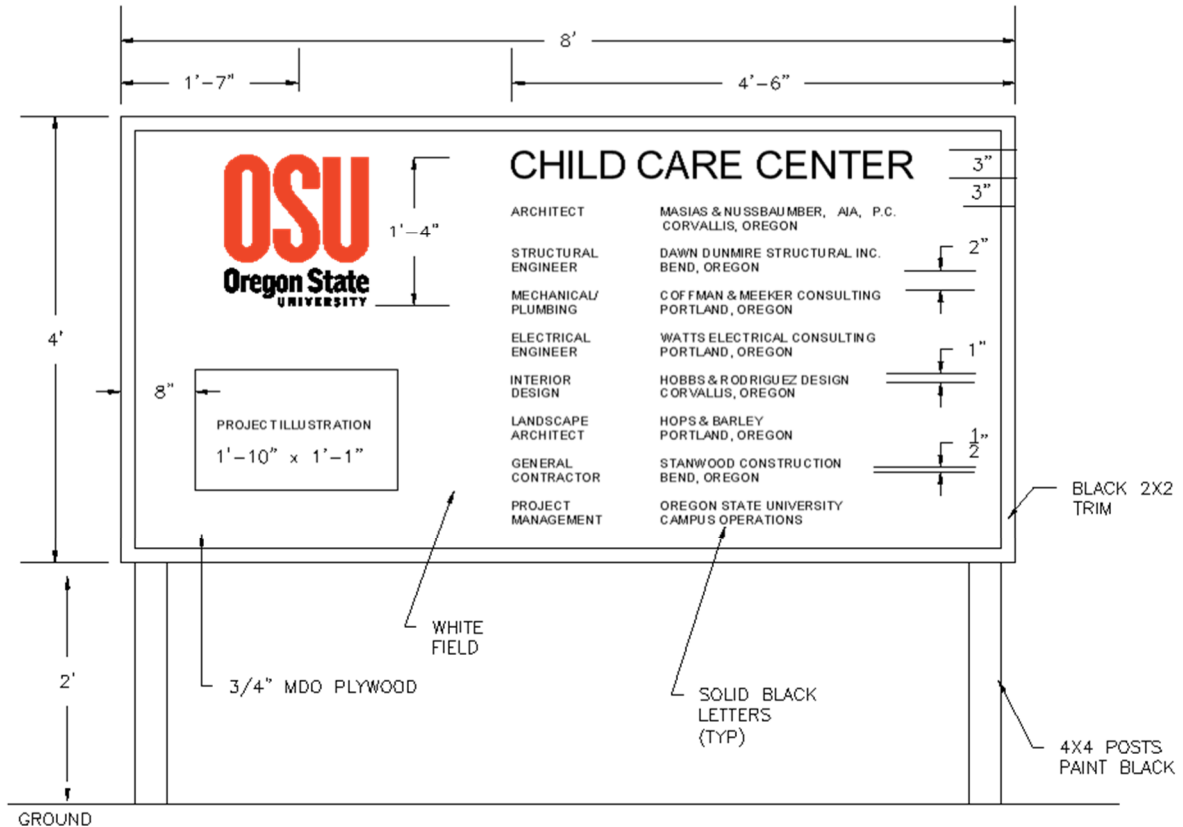
- A. Water Control:
 1. Maintain excavations free of water.
 2. Provide, operate, and maintain necessary pumping equipment.

- B. Protection:
 - 1. Protect installed Work and provide special protection where specified in individual specification sections.
 - 2. Prohibit traffic or storage upon waterproofed or roofed surfaces.
- C. Security:
 - 1. Provide security and facilities to protect Work and existing facilities and Owner's operations from unauthorized entry, vandalism, or theft.
 - 2. Coordinate operations with Owner's Authorized Representative.
- D. Temporary Traffic Control /Pedestrian Accessibility
 - 1. A continuous route for all pedestrians, including persons with disabilities and bicyclists, shall be maintained at all times. When existing pedestrian facilities are disrupted, closed, or relocated in a construction zone, temporary pedestrian facilities shall be provided.
 - 2. Temporary pedestrian facilities should be safe and accessible. There should be no curbs or abrupt changes in grade that could cause tripping or be a barrier to wheelchair use.
 - 3. Signage shall be provided directing people to the temporary accessible route. The signage shall include the International Symbol of Accessibility.
 - 4. Contractors shall not block temporary walkways with vehicles, equipment, construction materials, signs, trash, or other objects that might prohibit pedestrian passage.
 - 5. Construction equipment and equipment operation must be separated from any open walkways. At construction zones, pedestrian fences or other protective barriers shall be provided to prevent access into the construction zone.

1.13 PROJECT SIGNAGE

- A. Contractor is permitted to post only one project identification sign based on the following example:

OSU TYPICAL JOB SIGN

**1.14 PREPARATION**

- A. Consult with Owner to review jobsite areas required for field offices, material storage and stockpiles, equipment storage, access to different locations, etc.

1.15 PERFORMANCE

- A. Confine equipment, apparatus, and storage of material to work limits. The Owner will not be responsible for protection of materials and equipment from damage, pilfering, etc.
- B. Install temporary facilities in such a manner that the installed work will not be damaged.
- C. Do not use facilities of existing building unless authorized in writing by the Owner.
- D. Effective September 1, 2012, OSU became a non-smoking campus and smoking is prohibited on all Campus property.
- E. Keep facilities well maintained.
- F. Relocate temporary facilities as required during job progress.

- G. At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:
1. Replace air filters and clean inside of ductwork and housings.
 2. Replace significantly worn parts and parts that have been subject to unusual operating conditions.
 3. Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

END OF SECTION

Oregon State University Construction and Maintenance Safety Requirements

EH&S, 100 Oak Creek Building, Corvallis, OR 97331-7405, (541) 737-2273,
FAX (541) 737-9090

Complete OSU Construction and Maintenance Safety Form - Send completed documents (including Site Safety Plan and all separate answer pages) to Construction Contract Administration along with the signed contract and bonds.

Project Isolation - All construction and remodeling activities regardless of size and/or scope must be fenced, barricaded, or otherwise protected to restrict entrance and to ensure the safety of those in the general area. See isolation requirements.

Site Safety Plan - A site safety plan will be required and will address:

- General Information
- Emergency Information
- Key Organization Personnel
- Hazard Evaluation/Facility Impact
- Emergency Procedures
- Work Zones
- Security Measures
- Fire Protection

A model plan is attached. This form can be used if another plan has not already been prepared. Contact OSU Environmental Health & Safety for more information 737-2505.

Isolation Requirements

General: All construction, maintenance, and remodeling activities, regardless of size or scope, must be fenced, barricaded, or otherwise isolated to restrict entrance and to ensure the safety of those in the general area.

Outdoor Activities: Outdoor projects require the following perimeter isolation:

- A six foot chain-link fence, with controlled access points, extending in all directions around the excavation or building site such that no area of the construction is accessible to pedestrians or unauthorized personnel or vehicles.
- Isolation area will include vehicle loading and unloading areas.
- At the University's option, other barricading plans may be accepted. These may apply to projects such as road resurfacing, parking lot striping, exterior building water proofing, deliveries, etc. Contact EH&S regarding other barricading plans.

Overnight: Any excavation across or adjacent to sidewalks or pathways which must be left open overnight, must be identified with working, blinking construction lights in addition to solid barricades

Indoor Activities: Indoor construction or maintenance projects which will create dust, potentially hazardous fumes or vapors, or offensive odors are subject to the following isolation:

- Areas where existing doors can provide isolation will be labeled "Construction Area--Authorized Personnel Only".

- All other areas will be isolated by a solid barrier. The minimum barrier allowed is 4 mil poly sheeting sealed to prevent migration of dust.
- Mechanical ventilation may be required.
- A solid wall is required if building envelope is opened to the outside.

Contractor Responsibilities

- The contractor will provide all barricading, isolation, and fencing material. OSU will not provide any materials.
- The contractor will also provide all appropriate warning and detour signs when sidewalks, exits, or roads are closed.
- Contractor will provide all other construction area signs.

OSU Construction and Maintenance Safety Form

Send completed safety documents to Construction Contract Administration with contract and bonds.

Date: _____ Project: _____

Start Date: _____ Completion date: _____

Contractor: _____ Contact: _____

Work # _____ 24 hr #: _____

OSU Project Mgr: _____ Work / 24hr #'s: _____

Dept Contact: _____ OSU EH&S Contact: _____

Preconstruction meeting? **Y N** Date/Time/Location: _____

For the following items, prepare answers on a separate sheet for all items marked "Yes". Precede each answer with the appropriate item number. All boxes need to be checked

Y	N	For This Project	If YES, then:
		1 Will any confined spaces be accessed?	Describe location of entry Specify location of permit Notify EH&S prior to entry See SAF 209
		2 Will hot work be performed (welding, cutting, brazing, etc.)?	Provide min. 5# 2A10BC extinguisher within 10 ft If indoors - provide and describe ventilation See SAF 214
		3 Any products brought to campus?	Provide MSDS on site prior to first use; Make available to OSU on request
		4 Will lead paint be impacted?	Describe plan to limit contamination
		5 Will asbestos-containing-material be impacted?	Coordinate with OSU asbestos manager
		6 Will <u>any</u> materials (construction debris, soil, water, etc) be removed from campus?	Describe in detail identity and disposition of material (how, where)
		7 Any open trenches or holes?	Describe isolation procedures (see Page 1)
		8 Will a crane be used?	Describe crane safety plan (include plan to prevent loads above occupied areas)
		9 Is this project building a new facility, a major remodel?	Provide Site Safety plan Describe isolation procedures (see Page 1)
		10 Is this a minor remodeling project?	Provide, or fill out model Site Safety Plan form (see Page 3) Describe isolation procedures (see Page 1)
		11 Will air contamination be produced (e.g. dust, CO, solvent vapors, VOCs, odors)?	Describe project ventilation and isolation Indicate position of building air intake(s)
		12 Will there be noise > 85 dB?	Describe noise minimization plan
		13 Will this project use a scaffold or an external chute?	Describe isolation, dust control, installation
		14 Will this project involve a working surface >6' above a lower level	Describe fall protection
		15 Will any "blind" saw-cuts or penetrations be made in existing foundations, floors, ceilings and/or walls?	Describe plan for detecting and protecting power lines or other building utility lines.

EH&S Review: _____ Date: _____

Model Site Safety Plan

1. General Information

Contractor name _____
 Address _____
 City, State, Zip _____
 Site Safety Officer _____ Project Dates _____
 Project Name _____

2. Emergency Information

Emergency Response	911	OSU EH&S and OSU Facilities Services must be notified in the event of an emergency
Hazardous Materials Spill		
MSDS on-site location		
OSU EH&S	(541) 737-2273	
Facilities Services	(541) 737-2969	

3. Contractor Key Personnel

	Name	Phone	Emergency Contact
Company Owner			
Project Manager			
Job Supervisor			
Site Safety Officer			
Other Responsible Individual			
24 Hour Notification			

List of employees on site _____

4. Hazard Evaluation/ Facility Impact	
Physical	Yes / No
Heavy Equipment	
Noise	
Heat	
Elevation	
Radiation Materials	
Excavations	
Underground Utilities	
Confined Spaces	
Fire Prevention	
Electrical	

5. Emergencies
Services
Evacuation Route
First Aid Location
Hazardous Materials Spill Procedure

6. Work Zones

Material Storage _____
 Parking locations _____
 Individuals with OSU keys _____
 Access issues _____

7. Security measures

8. Fire protection

SECTION 01 56 39**TREE AND PLANTING PROTECTION****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Section includes temporary fencing, barricades, and guards to protect trees, plants and groundcovers not indicated to be removed, as necessary and required to prevent damage above and below grade.

1.02 DEFINITIONS

- A. Dripline: Outer perimeter of branches of any tree or plant.
- B. Groundcover: Includes but not limited to plants and grass.

1.03 PERFORMANCE REQUIREMENTS

- A. The Contractor shall exercise utmost care to protect existing trees and plants designated to remain and shall comply with all protection requirements provided by Owner and City of Corvallis as conveyed through the Owner's Authorized Representative.
- B. The Contractor shall install tree protection fencing as detailed and shall prevent damage to shrubs, groundcover, trees, root systems, soil, bark, foliage, branches and limbs due to construction activities, including but not limited to:
 - 1. Soil contamination, erosion, and compaction.
 - 2. Excessive wetting, and ponding due to storm water, and construction run-off.
 - 3. Alteration of grade, stockpiling of soil, debris, and materials.
 - 4. Damage to soil, roots, bark, trunk, limbs, branches, and foliage.
 - 5. Prevent unauthorized cutting, breaking, skinning and bruising of roots, branches, and bark.

1.04 SUBMITTALS

- A. Procedural proposal for tree and plant protection, describe methods of protection, and stabilization, provide drawings and supporting documentation as directed.
- B. Contractor's Condition Inspection; include written report and color photographs.

1.05 PROJECT CONDITIONS

- A. Install protection during initial mobilization at the Work site, and maintain until substantial completion.
- B. If, in the opinion of the Owner's arborist, additional protection is required, the Contractor shall install additional fencing as directed and without cost to the Owner.
- C. The location and requirements for additional fencing shall be determined by the

Owner's arborist prior to, and at any time during the course of the Work.

- D. Fencing:
 - 1. Fencing shall be installed at the tree and plant protection areas as detailed on Plans, or as directed by the Owner's Authorized Representative.
 - 2. Tree and plant protection fences shall remain in place until all Work is completed and shall not be removed or relocated without the approval of the Owner's Authorized Representative.
- E. Driving and Parking:
 - 1. Not permitted off paved surfaces without the approval of the Owner's Authorized Representative.
 - 2. When approved, the Contractor shall place plywood of sufficient thickness and width to support vehicles and prevent rutting on the area to be driven on.
 - 3. Care shall also be taken with respect to existing lawn sprinkler systems.
- F. Storage of materials and Debris: Not permitted off paved surfaces.

PART 2 PRODUCTS

2.01 MANUFACTURED COMPONENTS

- A. Chain Link Fencing: 11 gage galvanized chain link, six feet. tall, and 1.5 inch inside diameter galvanized steel line posts and 2.5 inch inside diameter corner posts, provide lockable gates as necessary.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Inspect trees, plants, and groundcovers, document existing conditions prior to installation of protection.

3.02 EXECUTION

- A. Pruning and Cutting of Roots, Branches and Foliage:
 - 1. Review conditions with Architect or Owner prior to need for work, and proceed as directed.
 - 2. All pruning to be done by Owner's landscape maintenance personnel or ISA Certified arborist under the direction of Owner's Landscape Management Department.
 - 3. Perform pruning and cutting with sharp instruments intended for the purpose; do not break or chop.
- B. Root Cuttings:
 - 1. Carefully and cleanly cut roots and branches of trees indicated to be left standing

- where such roots and branches obstruct new construction.
2. Protect exposed roots with wet burlap until they can be covered with soil.
- C. Excavation and Trenching Within Drip Lines:
1. Permitted where indicated, and at other specifically approved locations.
 2. Tunnel under or around roots by hand digging or boring.
 3. Do not cut main lateral roots and tap roots over one inch diameter; cut smaller roots which interfere with installation of new Work.
 4. Do not allow exposed roots to dry out before permanent backfill is placed; provide temporary earth cover, or pack with peat moss and wrap with burlap.
 5. Water and maintain roots in moist condition and temporarily support and protect from damage until permanently relocated and covered with backfill.
- D. Existing Grading: Maintain within drip line of trees and plants unless otherwise indicated on the drawing and approved by the Owner's Authorized Representative.
- E. Tree Protection:
1. Provide temporary fence complying with Section 01 51 00 for protection of trees to remain.
 2. Extend fencing ten feet beyond dripline, except where greater distance is required for protection of Elm trees.
 3. Prevent entry into protected areas except as authorized in writing by the Owner's Authorized Representative.

3.03 REPAIR AND REPLACEMENT OF TREES AND PLANTS

- A. Repair trees or shrubs damaged by construction operations as directed by the Owner.
- B. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged trees.
- C. Damaged Trees, Shrubs and Groundcover:
1. Replace where Owner's Authorized Representative determines restoration to normal growth pattern is not possible; plant and maintain as directed.
 2. Replacement trees up to 13 inches caliper and shrubs up to 4 feet tall: Same size as damaged tree or shrub, species selected by the Owner's Authorized Representative.
 3. Trees over 13 inch caliper and shrubs greater than 4 feet tall: Compensate Owner as determined by an acceptable consulting arborist registered with the American Society of Consulting Arborists.
 4. Replacement groundcovers: Same size and quality as damaged species selected by Owner's Authorized Representative.

END OF SECTION

SECTION 01 60 00**PRODUCT REQUIREMENTS****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Summary:
 - 1. Product options.
 - 2. Owner-furnished products.
 - 3. Product delivery, storage and handling.

1.02 PRODUCTS

- A. Products:
 - 1. New material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work.
 - 2. Products may also include existing materials or components specifically identified for reuse.
- B. Use interchangeable components of the same manufacture for similar components.
- C. Unless otherwise specified, all material and equipment shall be new; free from defects impairing strength, durability, and appearance; of current manufacture.
- D. Items specified shall be considered minimum as to quality, function, capacity, and suitability for application intended.
- E. Items incorporated into the Work shall conform to applicable specifications and standards designated, and shall be of size, make, type, and quality specified.
- F. Design, fabricate, and assemble in accordance with current best engineering, industry, and shop practices.
- G. Manufacture like parts of duplicate units to standard size and gauge to make them interchangeable.
- H. Two or more items of the same kind shall be identical and made by the same manufacturer.

1.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
- C. Products Specified by Naming One [or More] Manufacturer[s]: Products of manufacturer[s] named and meeting specifications, no options or substitutions

allowed.

- D. Substitution Procedure: Under Section 01 25 00.

1.04 REUSE OF EXISTING PRODUCTS

- A. Except as specifically indicated or specified, materials and equipment removed from existing construction shall not be used in the completed Work.
- B. For material and equipment specifically indicated or specified to be reused in the Work:
1. Use care in removal, handling, storage, and reinstallation to assure proper function in the completed Work.
 2. Arrange for transportation, storage, and handling of products which require off-site storage, restoration, or renovation.
 3. Remove and reinstall mechanical units, vents, guys, antennae, and electrical and grounding wires or conduits.

1.05 OWNER FURNISHED PRODUCTS

- A. Designate delivery dates of Owner-furnished items in the construction schedule.
- B. Receive, unload, store and handle Owner-furnished items at the site; protect from damage.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Transport, handle, store and protect products in accordance with manufacturer's instructions.
- B. Arrange deliveries in accordance with construction schedules; coordinate to avoid conflict with Work and site conditions.
- C. Deliver and store products in undamaged condition in manufacturer's original containers or packaging with identifying labels intact and legible.
- D. Inspect shipments to assure compliance with Contract Documents and reviewed submittals, and that products are undamaged.
- E. Prevent soiling or damage to products or packaging.
- F. Interior Storage: Maintain required temperature and humidity ranges. Verify that Owner furnished storage meets product manufacturer's requirements.
- G. Exterior Storage:
1. Store materials above ground to prevent soiling and/or moisture infiltration.
 2. Cover materials with waterproof breathable sheet coverings; provide adequate ventilation.
 3. All storage locations to be approved in advance by the Owner.
- H. Arrange storage to provide access for inspection.
- I. Coordinate with Owner's Authorized Representative all on-site storage activities.

J. Provide for security of stored products.

END OF SECTION

SECTION 01 73 29**CUTTING AND PATCHING****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Requirements and limitations for cutting and patching of Work.

1.02 RELATED SECTIONS

- A. Section 01 25 00, Product Substitution Procedures.
- B. Section 01 33 23, Shop Drawings, Product Data, Samples

1.03 SUBMITTALS

- A. Submit written request in advance of cutting or alteration which affects:
 - 1. Structural integrity of any element of the Work.
 - 2. Efficiency, maintenance, or safety of any operational element.
 - 3. Visual qualities of sight exposed elements.
 - 4. Work of Owner or separate contractor.
- B. Include in request:
 - 1. Identification of project.
 - 2. Location and description of 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.
 - 8. Date and time work will be executed.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Primary Products: Those required for original installation.
- B. Product Substitution: For any proposed change in materials, submit request for substitution under provisions of Section 01 25 00.

PART 3 EXECUTION**3.01 EXAMINATION**

- A. Inspect existing conditions prior to commencing Work, including elements subject to

damage or movement during cutting and patching.

- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work.
- B. Provide devices and methods to protect other portions of the Work from damage.
- C. Provide protection from elements for areas which may be exposed by uncovering work.

3.03 CUTTING AND PATCHING

- A. Execute cutting, fitting and patching to complete work.
- B. Fit products together, to integrate with other work.
- C. Remove and replace defective or non-conforming work.
- D. Provide openings in the work for penetration of mechanical and electrical work.

3.04 PERFORMANCE

- A. Execute work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.
- B. Cut rigid materials using masonry saw or core drill. Pneumatic tools are not allowed without prior approval from Owner's Authorized Representative.
- C. Restore work with new products in accordance with requirements of Contract Documents.
- D. At penetrations of fire rated walls, partitions, ceiling or floor construction, completely seal voids with approved fire rated material, to full thickness of the penetrated element.
- E. Refinishing:
 - 1. Refinish surfaces to match adjacent finish.
 - 2. For continuous surfaces, refinish to nearest intersection or natural break.
 - 3. For an assembly, refinish entire unit.

END OF SECTION

SECTION 01 74 00**CLEANING****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Related requirements specified elsewhere, cleaning for specific products or work: Specification section for that work.
- B. Maintain premises and public properties free from accumulations of waste, debris, and rubbish, caused by operations.
- C. At completion of Work remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight-exposed surfaces; leave project clean and ready for occupancy.

1.02 QUALITY ASSURANCE

- A. Standards: Maintain project in accord with applicable safety and insurance standards.
- B. Hazard Control:
 - 1. Store volatile wastes in covered metal containers.
 - 2. Provide adequate ventilation during use of volatile or noxious substances.

1.03 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

1.04 DURING CONSTRUCTION:

- A. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- B. At reasonable intervals during progress of Work clean site and public properties, and dispose of waste materials, debris and rubbish.
- C. Provide on-site containers for collection of waste materials, debris and rubbish.
- D. Remove waste materials, debris and rubbish from site and legally dispose of at public or private dumping areas off Owner's property.
- E. Vacuum clean interior building areas when ready to receive finish painting, and continue vacuum cleaning on an as-needed basis until project is ready for Substantial Completion or occupancy.
- F. Handle materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.

1.05 FINAL CLEANING

- A. Employ experienced workers, or professional cleaners, for final cleaning.
- B. In preparation for Substantial Completion or occupancy, conduct final inspection of sight-exposed interior and exterior surfaces, and of concealed spaces.
- C. Remove grease, dust, dirt, stains, labels, and other foreign materials from exposed interior and exterior finished surfaces.
- D. Remove putty, paint, labels, lubricants, etc., from windows, mirrors, and sash, and then polish, taking care not to scratch glass.
- E. Vacuum carpeting (shampoo where required), removing debris and excess nap.
- F. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
- G. Replace air filters where units were operated during construction.
- H. Maintain cleaning until project, or portion thereof, is occupied by Owner.

END OF SECTION

SECTION 01 77 00**CONTRACT CLOSEOUT****PART 1 GENERAL****1.01 DESCRIPTION**

- A. The requirements specified in this section relate to all Contractors individually performing under these Contract Documents:
 - 1. Project Record Documents.
 - 2. Final review and payment.
- B. Related work specified elsewhere:
 - 1. OSU General Conditions.
 - 2. Shop Drawings, Product Data and Samples, Section 01 33 23.

1.02 PROJECT RECORD DOCUMENTS

- A. The Project Record Documents shall be organized to include the following information, as applicable:
 - 1. Table of Contents
 - 2. Project Team List
 - 3. Specifications (Including Addenda and Change Orders)
 - 4. Drawings
 - 5. Inspection Reports
 - 6. Signed Warranty(ies)
 - 7. Maintenance Instructions
- B. Draft Project Record Documents shall be submitted for review upon 75% completion of the Work.
- C. Project Record Documents shall be submitted electronically to the Owner. Hard copies will not be accepted.
- D. The project team list shall include the name, address, and phone number of the Owner, Contractor, Inspector, Subcontractors, and the materials manufacturers.
- E. Legibly mark each Specification section to indicate actual as-built condition indicating changes in the Work made by addenda or change order or actual materials used and actual manufacturer(s) used.
- F. Maintain current and accurate as-built mark-ups during construction and make available to Owner's Authorized Representative upon request.
- G. Legibly mark the drawings to indicate actual as-built conditions indicating changes in the Work made by addenda or change order or actual conditions which differ from the drawings.
- H. Redraw or provide new drawings as required for a complete as-built set of drawings.

The Contractor shall maintain current and accurate as-built mark-ups during construction and make available to Owner's Authorized Representative.

- I. Include inspection reports if applicable.
- J. Include, in a single section, all copies of the Project's labor and material warranties clearly marked to identify the Owner's responsibilities under the terms of each warranty and the section of Work that each warranty covers. One set must be clearly marked as containing original documents.
- K. In the case of an elevator installation, the Contractor's and manufacturer's warranty shall provide for the Owner's right to respond to emergency/car failure situations for the purpose of extricating individuals trapped in the elevator.
- L. Include maintenance instructions complete with technical information and name, address, and phone number of the Contractor(s) and manufacturer(s) of each material and product.

1.03 FINAL REVIEW AND PAYMENT

- A. Prior to completion, the Contractor shall inspect the Work and make a Punch-list noting all items that are incomplete and/or incorrect.
- B. The Contractor shall notify all Subcontractors in writing of incomplete and/or incorrect items. Notify far enough in advance of the completion date that the Work can be completed on schedule. Said Work shall be immediately corrected.
- C. Should conditions prevail which prohibit some elements of the Work from being accomplished, but the work-in-place will perform the primary function (i.e., painting cannot be completed due to high moisture content of masonry walls.) the Contractor shall record the reason with this Punch-list item requesting temporary delay in completion from the Owner in writing.
- D. Notify the Owner in writing that all items are completed and ready for final review or else that the Work product is fully usable, but some listed deficiencies remain to be completed. Submit all record documents at this time.
- E. The Owner will review all documents. When the documents include a Contractor's request for delay in completion, the Owner will review all Work which is certified as complete to the best knowledge of the Contractor. The Owner will also review the listed incomplete Work and assign a value to such uncompleted work.
- F. The Contractor shall make the required corrections to the Work expeditiously. A letter will be addressed to the Contractor informing the Contractor of the project status.
- G. When Contract closeout procedures are completed and all Punch-list deficiencies have been corrected, provide Owner with final corrected Project Record Documents based on Owner's preliminary review. Correct Project Record Documents shall be in electronic format.

- H. Final Completion by the Owner will be documented and the Contractor will receive written notice of acceptance of the Work and notification that final payment may be billed and released.
- I. All warranties shall commence and become effective beginning on the date of Substantial Completion.

END OF SECTION

SECTION 08 11 13 – HOLLOW METAL FRAMES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes hollow-metal Door and Window Frames.
- B. Related Requirements:
 - 1. Section 08 14 16 “Flush Wood Doors” for coordination with frames.

1.2 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

1.3 SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Include the following:
 - 1. Elevations of each door type with associated details and accessories.
- C. Samples for Verification:
 - 1. The intent is to match the existing doors as closely as possible.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow-metal work palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use non-vented plastic.
 - 1. Provide additional protection to prevent damage to factory-finished units.
- B. Deliver welded frames with two removable spreader bars across bottom of frames.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain hollow-metal work from single source from single manufacturer.

2.2 INTERIOR FRAMES

- A. Standard-Duty Frames: SDI A250.8, Level 1. At interior locations as scheduled.
 - 1. Physical Performance: Level C according to SDI A250.4.
 - 2. Frames:
 - a. Materials: Uncoated, cold-rolled steel sheet, minimum thickness of 0.042 inch.
 - b. Construction: Fully welded.
 - 3. Exposed Finish: Factory primed for field-finishing to match existing.

2.3 FRAME ANCHORS

- A. Jamb Anchors:
 - 1. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch (1.0 mm) thick.

- B. Floor Anchors: Formed from same material as frames, minimum thickness of 0.042 inch (1.0 mm). Door frame locations in this remodel are above existing access flooring.

2.4 FABRICATION

- A. Fabricate hollow-metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for metal thickness. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
- B. Hollow-Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
 - 1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
 - 2. Floor Anchors: Weld anchors to bottoms of jambs with at least four spot welds per anchor; however, for slip-on drywall frames, provide anchor clips or countersunk holes at bottoms of jambs.
 - 3. Jamb Anchors: Provide number and spacing of anchors as follows:
 - a. Stud-Wall Type: Locate anchors not more than 18 inches (457 mm) from top and bottom of frame. Space anchors not more than 32 inches (813 mm) o.c. and as follows:
 - 1) Three anchors per jamb up to 60 inches (1524 mm) high.
 - 2) Four anchors per jamb from 60 to 90 inches (1524 to 2286 mm) high.
 - 3) Five anchors per jamb from 90 to 96 inches (2286 to 2438 mm) high.
 - 4) Five anchors per jamb plus one additional anchor per jamb for each 24 inches (610 mm) or fraction thereof above 96 inches (2438 mm) high.
 - 4. Door Silencers: Drill stops in strike jamb to receive three door silencers.
- C. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, and templates.

2.5 STEEL FINISHES

- A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.
 - 1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Install hollow-metal work plumb, rigid, properly aligned, and securely fastened in place. Comply with Drawings and manufacturer's written instructions.

- B. Hollow-Metal Frames: Install hollow-metal frames for doors of size and profile indicated. Comply with SDI A250.11 or NAAMM-HMMA 840 as required by standards specified.
1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
 - a. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
 - b. Install frames with removable stops located on secure side of opening.
 - c. Install door silencers in frames before grouting.
 - d. Remove temporary braces necessary for installation only after frames have been properly set and secured.
 - e. Check plumb, square, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.
 - a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
 3. Metal-Stud Partitions: Solidly pack mineral-fiber insulation inside frames.
 4. In-Place Metal Stud Partitions: Secure slip-on drywall frames in place according to manufacturer's written instructions.
 5. Installation Tolerances: Adjust hollow-metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
 - a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.

3.2 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow-metal work that is warped, bowed, or otherwise unacceptable.
- B. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

END OF SECTION 08 11 13

SECTION 08 14 16 – FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Solid-core wood veneer-faced swinging doors.
 - 2. Shop priming flush wood doors.
 - 3. Factory fitting flush wood doors to frames and factory machining for hardware.
- B. Related Requirements:
 - 1. Section 08 71 00 "Door Hardware".

1.3 SUBMITTALS

- A. Product Data: For each type of door. Include details of core and edge construction and trim for openings. Include factory-finishing specifications.
- B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; and construction details.
- C. Samples for Verification:
 - 1. The design intent is to match the existing wood doors as closely as possible. Sub-contractor will need to review sample colors on site to determine the best match.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is a certified participant in AWI's Quality Certification Program is a licensee of AWI's Certified Compliance Program.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of referenced standard and manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Sustainable Design Requirements:
 - 1. Low-Emitting Materials: For field applications that are inside the weatherproofing system, provide materials that meet the following requirements:
 - a. Composite wood or agrifiber products or adhesives shall not contain urea-formaldehyde resin.

2.2 FLUSH WOOD DOORS, GENERAL

- A. All Composite Wood products shall be made using ultra-low-emitting formaldehyde (ULEF) resins as defined in the California Air Resources Board's "Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products" (CARB Phase II) or shall be made with no added formaldehyde (NAF).

- B. Quality Standard: In addition to requirements specified, comply with AWI's, AWMAC's, and WI's "Architectural Woodwork Standards.
- C. WDMA I.S.1-A Performance Grade: Standard duty.
- D. Structural-Composite-Lumber-Core Doors:
 - 1. Structural Composite Lumber: WDMA I.S.10.
 - a. Screw Withdrawal, Face: 700 lbf (3100 N).
 - b. Screw Withdrawal, Edge: 400 lbf (1780 N).

2.3 SOLID-CORE DOORS

- A. Interior Veneer-Faced Doors:
 - 1. Grade, for Opaque Finishes: Custom.
 - 2. Veneer Species: Sugar Maple (*Acer saccharum*), match existing.
 - 3. Core: Either glued or nonglued block or structural composite lumber.
 - 4. Construction: Seven plies, either bonded or nonbonded construction.

2.4 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
- B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, BHMA-156.115-W, and hardware templates.
 - 1. Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.

2.5 FACTORY FINISHING

- A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
- B. Factory finish doors where indicated in schedules or on Drawings as factory finished.
- C. Finish:
 - 1. Grade: Custom.
 - 2. Finish: AWI System OP-2 catalyzed lacquer.
 - 3. Color: Match existing veneer-faced doors.
 - 4. Sheen: Match existing veneer-faced doors.

PART 3- EXECUTION

3.1 EXAMINATION

- A. Examine doors and installed door frames, with Installer present, before hanging doors.
 - 1. Verify that installed frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
 - 2. Reject doors with defects.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Hardware: For installation, see Section 08 71 00 "Door Hardware."
- B. Installation Instructions: Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.
- C. Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted for fire-rated doors. Machine doors for hardware. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.
 - 1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/8 inch from bottom of door to top of decorative floor finish or covering unless otherwise indicated. Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold unless otherwise indicated.
 - 2. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.
- D. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- E. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 08 14 16

SECTION 08 71 00 – DOOR HARDWARE

PART 1 - GENERAL

1.1 GENERAL

- A. All door hardware to match with existing building door hardware systems for manufacturer, keying, cylinders, etc.
- B. All door hardware to meet OSU Construction Standards.

<https://fa.oregonstate.edu/cpd-standards/8-openings/section-08-71-00-door-hardware>

HW SET # E-01

Openings

2000B-A

Each door or doors to have:

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	LOCK	EXISTING		
1	EA	MAGNET	SEM7830 12V/24V/120V	689	LCN
1	EA	MAGNET	SEM7850 12V/24V/120V	689	LCN

VERIFY WALL CLEARANCE FOR WALL MAGNET.

SEM7850 3 5/8"

SEM7830 4 1/8"

SUPPLY EXTENSION IF REQUIRED

HW SET # E-02

Openings

2000B-B

Each door or doors to have:

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
4	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	POWER TRANSFER	EPT10 CON	689	VON
1	EA	EU MORTISE LOCK	L9092BDCEU 17A RX CON 12/24 VDC	626	SCH
1	EA	PERMANENT CORE	1C7 VERIFY, VERIFY KEYWAY	626	BES
1	EA	SURFACE CLOSER	4040XPT BUMP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER
3	EA	MOUNTING BRACKET	870SPB		ZER
1	EA	WIRE HARNESS	CON-192P VERIFY LENGTH		SCH
1	EA	WIRE HARNESS	CON-6W		SCH
1	EA	DOOR CONTACT	679-05HM	BLK	SCE
			ACCESS CONTROL - WORK OF DIVISION 28		
			POWER SUPPLY - WORK OF DIVISION 28		

OPERATION: ACCESS CONTROL UNLOCKS LEVER.

FAIL SECURE

IF CLOSER IS MOUNTED ON THE PUSH SIDE OF THE DOOR USE 870 BRACKET (*OPERATION:
ACCESS CONTROL UNLOCKS LEVER.
FAIL SECURE*)

HW SET # E-03

Openings

2026

Each door or doors to have:

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
4	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	POWER TRANSFER	EPT10 CON	689	VON
1	EA	EU MORTISE LOCK	L9092BDCEU 17A RX CON 12/24 VDC	626	SCH
1	EA	PERMANENT CORE	1C7 VERIFY, VERIFY KEYWAY	626	BES
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER
3	EA	MOUNTING BRACKET	870SPB		ZER
1	EA	WIRE HARNESS	CON-192P VERIFY LENGTH		SCH
1	EA	WIRE HARNESS	CON-6W		SCH
1	EA	DOOR CONTACT	679-05HM	BLK	SCE
			ACCESS CONTROL - WORK OF DIVISION 28		
			POWER SUPPLY - WORK OF DIVISION 28		

OPERATION: ACCESS CONTROL UNLOCKS LEVER.

FAIL SECURE

IF CLOSER IS MOUNTED ON THE PUSH SIDE OF THE DOOR USE 870 BRACKET (*OPERATION:
ACCESS CONTROL UNLOCKS LEVER.
FAIL SECURE*)

HW SET # E-04

Openings

2004

Each door or doors to have:

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
4	EA	HINGE	3CB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	POWER TRANSFER	EPT10 CON	689	VON
1	EA	EU MORTISE LOCK	L9092BDCEU 17A RX CON 12/24 VDC	626	SCH
1	EA	PERMANENT CORE	1C7 VERIFY, VERIFY KEYWAY	626	BES
1	EA	SURFACE CLOSER	4040XPT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER
1	EA	WIRE HARNESS	CON-192P VERIFY LENGTH		SCH
1	EA	WIRE HARNESS	CON-6W		SCH
1	EA	DOOR CONTACT	679-05HM	BLK	SCE
			ACCESS CONTROL - WORK OF DIVISION 28		
			POWER SUPPLY - WORK OF DIVISION 28		

OPERATION: ACCESS CONTROL UNLOCKS LEVER.
FAIL SECURE

HW SET # E-05

Openings

1174

Each door or doors to have:

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	STOREROOM LOCK	L9080L 17A	626	SCH
1	EA	MORTISE CYLINDER	REUSE EXISTING	626	UNK
1	EA	ELECTRIC STRIKE	6210 FS 12/16/24/28 VAC/VDC	630	VON
1	EA	SURF. AUTO OPERATOR	4642 CS WMS 120 VAC	689	LCN
2	EA	ACTUATOR	216	630	SED
1	EA	ANNUNCIAT "OCCUPIED"	CM-AF500		CAM
1	EA	ANNUNCIAT "LOCKED"	CM-AF500		CAM
1	EA	"PUSH TO LOCK"	SWITCH CM-400WR/8		CAM
1	EA	PUSH SWITCH	CM-500/4		CAM
1	EA	RELAY	CX-22		CAM
1	EA	DOOR CONTACTS	CX-MDC		CAM
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE

EXISTING LOCKSET CAN BE REUSED IF STOREROOM FUNCTION.

END OF SECTION 08 71 00

SECTION 08 80 00 – GLAZING

PART 1 - GENERAL

1.1 GENERAL

- A. Products: 1” insulated Transparent Mirror Glass (One-Way glass)
 - 1. Manufacturer: Mirrorpane T.M. by Pilkington: www.pilkington.com (or approved equal)

END OF SECTION 08 80 00

SECTION 09 22 16 – NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Non-load-bearing steel framing systems for interior partitions.

1.2 SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Studs and Runners: Provide documentation that framing members' certification is according to SIFA's "Code Compliance Certification Program for Cold-Formed Steel Structural and Non-Structural Framing Members."
- B. Delegated-Design Submittal: Provide documentation for interior stud framing and ceiling installation to meet the requirements of the local Authority Having Jurisdiction and the requirements of the 2019 OSSC. This small interior project does not have a structural design engineer, so any required engineering will fall within the scope of the sub-contractor.

1.3 QUALITY ASSURANCE

- A. If any structural design is required by the AHJ, it will need to be designed and stamped by a structural engineer licensed to practice in State of Oregon.

1.4 COORDINATION

- A. Coordination of Wall Support With Building Structure and Other Building Systems: Where direct anchorage to building structure is impractical due to dimensional restriction, conflict with HVAC, plumbing, electrical or other considerations provide fully engineered design for wall support assembly. Coordinate with HVAC, Plumbing, electrical fire protection and all other building systems to identify potential areas of conflict for ceiling anchorage and prepare engineered solution in advance of installation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.
- B. Horizontal Deflection: For wall assemblies less than 20 feet total unsupported height, limited to L/240 of the wall height based on horizontal loading of 5 lbf/sq. ft. (240 Pa).
- C. Vertical Deflection: Match horizontal deflection requirements.
- D. Framing Spacing: As required for wall equipment and finishes indicated.
 - 1. Limit framing at walls scheduled to receive level 4 finishes to 16-inches o.c. maximum.

2.2 FRAMING SYSTEMS

- A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.
 - 1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.

2. Protective Coating: ASTM A 653/A 653M, G40 (Z120), hot-dip galvanized unless otherwise indicated.
- B. Studs and Runners: ASTM C 645. Use either steel studs and runners or embossed steel studs and runners.
- C. Slip-Type Head Joints: Where indicated, provide one of the following:
 1. Clip System: Clips designed for use in head-of-wall deflection conditions that provide a positive attachment of studs to runners while allowing 2-inch (51-mm) minimum vertical movement.
 2. Double-Runner System: ASTM C 645 top runners, inside runner with 2-inch- (51-mm-) deep flanges in thickness not less than indicated for studs and fastened to studs, and outer runner sized to friction fit inside runner.
 3. Deflection Track: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs.

2.3 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards.
 1. Fasteners for Metal Framing: Of type, material, size, holding power, and other properties required to fasten steel members to substrates.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Installation Standard: ASTM C 754.
 1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.
- B. Install framing and accessories plumb, square, and true to line, with connections securely fastened.
- C. Install supplementary framing, and blocking to support new wall mounted video displays. Prior to install, coordinate equipment location, size, and weight with owner who is providing the equipment.
- D. Install bracing at terminations in assemblies.

3.3 INSTALLING FRAMED ASSEMBLIES

- A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.
 1. Multilayer Application: 16 inches (406 mm) o.c. unless otherwise indicated.
- B. Install studs so flanges within framing system point in same direction.

- C. Install tracks (runners) at floors and overhead supports. Extend framing full height to structure. Continue framing around ducts that penetrate partitions above ceiling.
 - 1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
 - 2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
 - a. Install two studs at each jamb unless otherwise indicated.
 - b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch (13-mm) clearance from jamb stud to allow for installation of control joint in finished assembly.
 - c. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.
- D. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch (3 mm) from the plane formed by faces of adjacent framing.

END OF SECTION 09 22 16

SECTION 09 29 00 – GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Interior gypsum board
 - 2. Tile backing panels.
 - 3. Acoustical sealant.
 - 4. Finishing.
 - 5. Acoustic insulation.
- B. Related Requirements:
 - 1. Section 09 22 16 “Non-Structural Metal Framing” for coordinating backing and blocking requirements.

1.3 SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For the following products:
 - 1. Trim Accessories: Full-size Sample in 11-inch long (maximum) length for each trim accessory indicated.
- C. Shop Drawings: For casing beads, moldings, panel transitions and closure profiles.
 - 1. Include elevations showing typical and unique conditions, openings, reveals, panel edges, control and expansion joints and transitions.
 - 2. Show details of special conditions and Project specific details.
 - 3. Show details of wall closures and terminations, including acoustical wall closures.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.5 FIELD CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written instructions, whichever are more stringent.
- B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.
- C. Do not install panels that are wet, moisture damaged, and mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.

2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 GYPSUM BOARD, GENERAL

- A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.
- B. Approved Manufacturers:
 1. American Gypsum; www.americangypsum.com.
 2. CertainTeed Corp.; www.certainteed.com.
 3. Georgia Pacific; www.gp.com.
 4. National Gypsum Co.; www.nationalgypsum.com.
 5. PABCO Gypsum; www.pabco gypsum.com.
 6. United States Gypsum Co. (USG); www.usg.com.

2.2 INTERIOR GYPSUM BOARD

- A. Gypsum Wallboard, General: All gypsum wall board material is to be type 'X' and 5/8" thickness unless otherwise indicated.
- B. Gypsum Board, Type X: ASTM C 1396/C 1396M.
 1. Thickness: 5/8 inch
 2. Long Edges: Tapered and featured (rounded or beveled) for prefilling.
 3. Applications: Provide at the following locations and others as indicated:
 - a. All walls scheduled for gypsum wall board.
- C. Gypsum Ceiling Board: ASTM C 1396/C 1396M.
 1. Thickness: 1/2 inch
 2. Long Edges: Tapered.
 3. Applications: Provide at the following locations:
 - a. Ceiling and soffit finishes, non-rated.
- D. Use Moisture Resistant Gypsum board in Single-User Toilet Room at non-tile walls.

2.3 TILE BACKING PANELS

- A. Cementitious Backer Units: ANSI A118.9 and ASTM C 1288 or ASTM C 1325, with manufacturer's standard edges.
 1. Thickness: 5/8 inch.
 2. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

2.4 BLOCKING AND BACKING

- A. Coordinate with Section 06 10 00 “Rough Carpentry”.
- B. Provide bidder-designed blocking and backing as required to support wall mounted video displays and toilet room accessories. Contractor shall coordinate the required backing installation with equipment or fixture manufacturer's recommendations.

2.5 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047.
 - 1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized-steel sheet.
 - 2. Shapes:
 - a. Cornerbead.
 - b. **Fry “Z” reveal molding DRMZ-625-625**

2.6 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
 - 1. Interior Gypsum Board: Fiberglass mesh.
- C. Joint Compound for Interior Gypsum Board: For each coat, use formulation that is compatible with other compounds applied on previous or for successive coats.
 - 1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
 - 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
 - 3. Fill Coat: For second coat, use setting-type, sandable topping or drying-type, all-purpose compound.
 - 4. Finish Coat: For third coat, use drying-type, all-purpose compound.

2.7 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.
- B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
- C. Steel Drill Screws: ASTM C 1002 unless otherwise indicated.
 - 1. For panels attached to heavy gauge cold-formed metal framing specified in Section 05 40 00 "Cold-Formed Metal Framing" use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
 - 2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.
- D. Acoustic Insulation:
 - 1. Sound-Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

2. Basis-of-Design Product: 4” Rockwool AFB Semi-Rigid Batt.

- E. Neoprene Isolation Gasket Tape: Closed cell foam, pressure-sensitive-adhesive (PSA).
- F. Acoustical Sealant: Manufacturer's standard non-sag, paintable, non-staining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates including welded hollow-metal frames and support framing, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

- A. General: Comply with ASTM C 840.
 - 1. Provide continuous acoustical sealant, acoustical insulation and/ or sound attenuation blankets around all penetrations in gypsum board systems, at both sides, including but not limited to penetrations for conduit, ductwork, piping, and structural members.
- B. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.
- C. Locate edge and end joints over supports. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- D. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
 - 1. Fit gypsum panels around ducts, pipes, and conduits.
 - 2. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch wide joints to install sealant.
- E. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- F. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- G. Seal construction at perimeters and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written instructions for locating

edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.

3.3 APPLYING INTERIOR GYPSUM BOARD

A. Single-Layer Application:

1. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
 - a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
2. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

B. Multilayer Application:

1. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
2. Fastening Methods: Fasten base layers with screws; fasten face layers with adhesive and supplementary fasteners.

3.4 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints, rounded or beveled edges, and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.
- D. Gypsum Board Finish Levels: Finish Gypsum board panels to level 4 finish according to ASTM C 840.

3.5 PROTECTION

- A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.
- B. Protect installed products from damage
- C. Remove and replace panels that are wet, moisture damaged, or mold damaged from transit or storage.

END OF SECTION 09 29 00

SECTION 09 30 00 - TILING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wall tile and associated accessory tiles and installation products.
2. Floor Tile patch around new floor drain.

B. Related Requirements:

1. Section 09 29 00 "Gypsum Board" for cementitious backer units and glass-mat, water-resistant backer board.

1.2 SUBMITTALS

A. Product Data

B. Shop Drawings: Show locations and tile pattern.

C. Provide full-size samples of tile, grout, and edge pieces for verification.

D. Furnish 3% extra tile and grout materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: Meet one of the requirements below:

1. Installer is a five-star member of the National Tile Contractors Association or a Trowel of Excellence member of the Tile Contractors' Association of America.
2. Installer's supervisor for Project holds the International Masonry Institute's Foreman Certification.
3. Installer employs Ceramic Tile Education Foundation Certified Installers or installers recognized by the U.S. Department of Labor as Journeyman Tile Layers.

PART 2 - PRODUCTS

2.1 TILE PRODUCTS

A. Wall Tile:

1. Basis-of-Design Product: Daltile, Matte Arctic White 0790

- a. Color Code: 0790, 3/8" thickness, Size: 3x6, Finish: Matte, Grout joint: 1/16" Pattern: Horizontal stacked bond, (to match existing toilet rooms).
- b. Accessory Tile shapes: Utilize matching 6x6 cove base for full perimeter of toilet room (including walls without tile) and associated inside and outside corner pieces. Utilize matching bullnose edge tiles to turn the outside corner next to the toilet.

B. Floor Tile patch around new floor drain: Utilize existing building stock of

2.2 TILE BACKING PANELS

A. Cementitious backer board units (ANSI A118.9) on metal studs.

2.3 SETTING MATERIALS

- A. Bonding agent (Latex Portland Cement Mortar) as recommended by TCNA and Tile manufacturer.

2.4 GROUT MATERIALS

- A. Provide tile grout as recommended by tile manufacturer and TCNA guidelines.
- B. Basis-of-Design Grout Manufacturer: Laticrete

2.5 MISCELLANEOUS MATERIALS

- A. Provide underlayments and/or Patching Compounds, as recommended by tile manufacturer or TCNA installation standards necessary for proper tile installation.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with thinset mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.
- B. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot toward drains.
- C. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

3.2 CERAMIC TILE INSTALLATION

- A. Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation". Comply with parts of the ANSI A108 series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA installation methods.
- B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- D. Wherever available, provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.
- E. Jointing Pattern: Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.

3.3 PROTECTION

- A. Clean and protect installed tile work.

END OF SECTION 09 30 00

SECTION 09 51 13 – ACOUSTICAL PANEL CEILINGS

1.1 GENERAL

- A. See FINISHES List on drawing sheet A2.02 for product specification information.
- B. Utilize only Commercial grade ceiling assembly meeting current Oregon adopted building codes.
- C. All supporting components must be certified as UL approved.
- D. Maintain 10-inches from the suspended ceiling to the bottom of equipment & ductwork to allow for ceiling tile removal.
- E. Provide 12 gauge minimum wire.
- F. Overstock Materials: 5% of each type of acoustic tile and/or panel installed.

SECTION 09 65 13 – RESILIENT BASE AND ACCESSORIES

1.1 GENERAL

- A. See FINISHES List on drawing sheet A2.02 for product specification information.

SECTION 09 68 00 – CARPETING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes carpet, including the following types:
 - 1. CPT-1:

1.3 SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include manufacturer's written data on physical characteristics and durability.
 - 2. Include manufacturer's written installation recommendations for each type of substrate.
- B. Shop Drawings: For carpet installation, showing the following:
 - 1. Show extent of installation of new CPT-1.
 - 2. Carpet type, color, installation, pattern, cushion.
- C. Samples for Verification: For each of the following products and for each color and texture required. Label Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.
 - 1. Carpet: **24-inch- (600-mm-)** square Sample, or full tile.
- D. Qualification Data: For Installer.
- E. Sample Warranty
- F. Maintenance Data
- G. Furnish extra materials, equal to 5 percent of amount installed, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1.4 WARRANTY

- 1. Warranty Period: manufacturer's standard warranty from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CARPET, CPT-1

- A. Basis-of-Design Product: No. 11024 "Freelance" by Tandus Centiva, div. of Tarkett; www.tandus-centiva.com.
 - 1. Color: No. 23801 "Salt Lake".
 - 2. Size: 18 x 36 inches.
- B. Installation Pattern: Vertical Ashlar.
- C. Backing: PVC-free "Ethos Powerbond" by Tandus Centiva.
- D. Installation: Direct glue.

2.2 INSTALLATION ACCESSORIES

- A. Adhesives: Water-resistant, mildew-resistant, nonstaining type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet and is recommended or provided by carpet and underlayment manufacturers. Low VOC adhesives shall be used for flooring installation.
- B. Tackless Carpet Stripping: Water-resistant plywood, in strips as required to match cushion thickness and that comply with CRI's "CRI Carpet Installation Standard."
- C. Seam Adhesive: Hot-melt adhesive tape or similar product recommended by carpet manufacturer for sealing and taping seams and butting cut edges at backing to form secure seams and to prevent pile loss at seams.
- D. Metal Edge/Transition Strips: Extruded aluminum with mill finish of profile and width shown, of height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints.
- E. Primer: Provide manufacturer recommended primer for porous substrates where required.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine carpet for type, color, pattern, and potential defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. General: Comply with CRI's "CRI Carpet Installation Standard" and with carpet manufacturer's written installation instructions for preparing substrates.
- B. Broom and vacuum clean substrates to be covered immediately before installing carpet.

3.3 CARPET INSTALLATION

- A. Comply with carpet manufacturer's written instructions and Shop Drawings. At doorways, center seams under the door in closed position.
- B. Cut and fit carpet to butt tightly to vertical surfaces.

3.4 CLEANING AND PROTECTION

- A. Perform the following operations immediately after installing carpet:
 - 1. Remove excess adhesive, and other surface blemishes using cleaner recommended by carpet manufacturer.
 - 2. Remove yarns that protrude from carpet surface.
 - 3. Vacuum carpet.
- B. Protect installed carpet.
- C. Protect carpet against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods recommended in writing by carpet manufacturer and underlayment manufacturer and carpet adhesive manufacturer.

END OF SECTION 09 68 00

SECTION 09 91 00 – PAINTING

1. REQUIREMENTS

- A. Plans shall designate color and sheen to be used.
- B. Coat/seal all items prior to installation as much as possible; special consideration(s) required in occupied buildings. At pre-construction meeting define plans to reduce impact to building users regarding application of finishes, paints, adhesives, etc.
 - 1. All Surfaces shall be primed prior to the application of minimum two finish coats of paint
 - 2. Apply at dry thickness of 1.5 mil per coat
- C. Paints should be selected for maximum durability (infrequent repainting) and minimum environmental and human impact for the given application. Consider ventilation, exposure to physical damage, vandalism potential, liquids, likely maintenance frequency, etc.
- D. Water based finishes only for interior and onsite applications.
- E. Basis of Design: Miller: Evolution, Premium
- F. The following paint manufacturers are acceptable:
 - 1. Benjamin Moore: Aura, Advance, or Natura
 - 2. Flecto (UHDS)
 - 3. Miller: Evolution, Premium
 - 4. Pittsburgh
 - 5. Rust-Oleum
 - 6. Sherwin-Williams
- G. OSHA Safety Colors:
 - 1. All colors should conform to OSHA and ANSI specifications and are available in IronClad Quick Dry Industrial Enamel (071).
- H. Low VOC materials are to be used; zero VOC when available. Paint containing 5 grams/liter or less is considered "Zero VOC", according to the EPA Reference Test Method 24. On new construction or major remodels, follow applicable LEED criteria for low or zero VOC paint. Low VOC < 50 grams/liter
- I. The finish manufacturer's recommendations for acceptable moisture ranges prior to application / installation shall be followed. Moisture testing on concrete, substrate, etc. is required prior to installation of finishes and results must be submitted to the OSU Project Manager.
- J. Covering or painting of any signs, labels, identification, etc. requires replacement.
- K. Provide schedule of colors and finishes including: manufacturer, product, color names and numbers, sheen level, and other specific identifying information.

2. APPROPRIATE PAINT APPLICATION BY AREA

A. Interior surfaces

1. OSU requires ceilings and walls in general purpose areas (offices, classrooms, conference rooms, break rooms, lobbies, hallways, etc.) to receive low or zero VOC paint.
2. Acceptable products:
 - a. Benjamin Moore: Aura, Advance, or Natura
 - b. Miller: Evolution, Premium
 - c. Sherwin-Williams: Duration, SuperPaint, Emerald
3. Doors, door frames, hand rails, corner trim, floors, certain lab surfaces and other areas exposed to high or frequent impact may receive higher durability products, satin sheen at a minimum. These products may or may not be low or zero VOC.
4. Eggshell paint shall be used on ceilings. Walls shall have minimum eggshell sheen. Higher use areas shall have higher sheen applications to allow for cleaning.

END OF SECTION 09 91 00

SECTION 10 14 00 - SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Signage to be Bidder-Designed. The intent for the signage is to both meet current OSU signage standards, and match existing building signage in type and general appearance.
2. Room-identification signs.
3. Interior wayfinding sign to Single-User Restroom. (matching existing building sign style and size)

1.3 SUBMITTALS

- A. Product Data.
- B. Shop Drawings.
- C. Samples for Verification.
- D. Sign Schedule.
- E. Qualification Data.
- F. Sample Warranty.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications.

1.6 WARRANTY

- A. Special Warranty: Manufacturer Warranty Period of Five years.

PART 5 - PRODUCTS

5.1 SIGNS

- A. Single-User Restroom should have two signs like those shown below:



Accessible Single User Restroom
with only Toilet



Changing Table Sign to be used in
combination with Single-User
Restroom sign, when provided

5.2 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for signs.
- B. Single-User Toilet Room signs shall include the language "SINGLE-USER RESTROOM" only, utilizing raised characters in uppercase sans serif fonts.
- C. Provide Grade 2 Braille and signage required to have braille.
- D. Signs shall be non-glare.
- E. The base of all raised text and Braille is to be located between a height of 48" and 60".
- F. Provide signage on both sides of Single-User Toilet Room door indicating that it is an automatic door.

5.3 ACCESSORIES

- A. Fasteners, Tapes, and Adhesive: As recommended by sign manufacturer for materials used.

PART 6 - EXECUTION

6.1 INSTALLATION

- A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.
- B. Room-Identification Signs and Other Accessible Signage: Install in locations on walls as indicated and according to accessibility standard.

END OF SECTION 10 14 00

SECTION 10 28 00 – RESTROOM ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Toilet accessories.
- 2. Underlavatory guards.

- B. Related Requirements:

- 1. Section 06 10 00 “Rough Carpentry” for coordination of blocking and bracing within walls

1.3 COORDINATION

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.4 SUBMITTALS

- A. Product Data: For each type of product.

- 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- 2. Include anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
- 3. Include electrical characteristics.

- B. Samples: Full size, for each exposed product and for each finish specified.

- 1. Approved full-size Samples will be returned and may be used in the Work.

- C. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.

- 1. Identify locations using room designations indicated.
- 2. Identify accessories using designations indicated.

- D. Sample Warranty: For manufacturer's special warranty.

1.5 WARRANTY

- A. Manufacturer's Special Warranty for Mirrors: Manufacturer Warranty Period of 15 years.

PART 2 - PRODUCTS

2.1 RESTROOM ACCESSORIES

- A. Toilet Paper Dispenser, TPD:
 - 1. Basis-of-Design Product: Georgia Pacific 56784 Compact roll Coastwide (541-926-3289) (CFCI)
- B. Toilet Seat Cover Dispenser, SCD:
 - 1. Basis-of-Design Product: Georgia Pacific, White, Model no. 57710, 1/2 fold (CFCI).
- C. Roll Towel Dispenser, PTD:
 - 1. Basis-of-Design Product: Georgia Pacific Blue Ultra Mechanical, Black, Model #59589 (OFCI)
- D. Soap Dispenser, SD:
 - 1. Basis-of-Design Product: Signatory FMX-12 Foam Soap Dispenser, available through Coastwide Laboratories (541-926-3289) (OFCI).
- E. Grab Bars: Stainless steel.
 - 1. Basis-of-Design Product: Model no. B-5806 Series by Bobrick. (CFCI)
 - 2. Sizes:
 - a. GB-1: 36 inches.
 - b. GB-2: 42 inches.
 - c. GB-3: 18 inches.
- F. Mirror, MR: Stainless steel frame.
 - 1. Basis-of-Design Product: No. B-290 2448 Welded-Frame Mirror 24 x 48 inches by Bobrick.
 - 2. Basis-of-Design Product: No. B-290 2472 Welded-Frame Mirror 24 x 72 inches by Bobrick.
- G. Sanitary Receptacle, SND:
 - 1. Basis-of-Design Product: Rubbermaid 6140, wall mount, white, plastic. (CFCI)
- H. Sanitary Napkin Vendor, SNV:
 - 1. Basis-of-Design Product: Evogen EV4, Item 88HSCEVNT4 Mini No Touch Dual, White Metal. (CFCI)
- I. Baby Changing Station, BCS-1:
 - 1. Configuration: Horizontal, surface-mounted.
 - 2. Basis-of-Design Product: Model no. KB200-SS by Bobrick.
 - 3. Material and Finish: Stainless steel, No. 4 finish (satin). Color – Grey 01
- J. Clothes Hook, CH:
 - 1. Basis-of-Design Product: Model no. B-2116 Heavy-Duty Clothes Hook with Concealed Mounting by Bobrick.
 - 2. Material and Finish: Stainless steel, No. 4 finish (satin).
 - 3. Application: Top of hook shall be no more than 48 inches above finished floor.

2.2 UNDERLAVATORY GUARDS

- A. Underlavatory Guard: Insulating pipe covering for supply and drain piping assemblies that prevents direct contact with and burns from piping; allow service access without removing coverings.
 - 1. Material and Finish: Antimicrobial, molded plastic, white.
- B. Acceptable Manufacturers:
 - 1. Plumberex Specialty Products, Inc.; www.plumberex.com.
 - 2. IPS Corp.; www.ipscorp.com.

2.3 FABRICATION

- A. General: Fabricate units with tight seams and joints, and exposed edges rolled.
- B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
- B. Grab Bars: Install to withstand a downward load of at least 250 lbf when tested according to ASTM F 446.

END OF SECTION 10 28 00

SECTION 10 44 15 – FIRE PROTECTION CABINETS AND EXTINGUISHERS

1. Semi-Recessed to match existing. White steel cabinet with narrow vertical glass door, Non-locking, with vertical red “FIRE EXTINGUISHER” text.
2. A photo of the existing cabinet has been provided on sheet A9.02 for reference.
3. Provide fire extinguisher to match existing type.

END OF SECTION 10 44 15

SECTION 12 24 13 – WINDOW ROLLER SHADES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Roller shade for manual operation and accessories.
- B. Shade fabric.

1.2 RELATED SECTIONS

- A. Section 06 10 00 - Rough Carpentry: Wood blocking and grounds for mounting roller shades and accessories.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Sequencing:
 - 1. Do not fabricate shades until field dimensions for each opening have been taken with finished conditions in place. "Hold to" dimensions are not acceptable.
 - 2. Do not install shades until final surface finishes and painting are complete.

1.4 SUBMITTALS

- A. Product Data: Manufacturer's catalog pages and data sheets for products specified including materials, finishes, dimensions, profiles, mountings, and accessories.
- B. Shop Drawings: Plans, elevations, sections, product details, installation details, operational clearances.
- C. Shadecloth Sample:
 - a. 6 inches (150 mm) square, representing actual material and color.
- D. Warranty: Provide manufacturer's standard 25 year limited warranty.

1.5 QUALITY ASSURANCE

- A. Installer for Roller Shade System - Qualifications: Installer trained and certified by the manufacturer with a minimum of ten years experience in installing products comparable to those specified in this section.

1.6 ROLLER SHADES, MANUAL OPERATION AND ACCESSORIES

- 1. Description: Manually operated fabric window shades.
 - a. Shade Type: Single Roller.
 - b. Mounting: Wall Mounted.
 - c. Size: As indicated on drawings.
 - d. Fabric: Black-out
- 2. Hembars: Designed to maintain bottom of shade straight and flat.
 - a. Style: Full wrap fabric covered bottom bar, flat profile with heat sealed closed ends.
- 3. Drive Chain: Continuous loop stainless steel beaded ball chain, 100 pound (45 kg) minimum breaking strength. Provide upper and lower limit stops.
 - a. Chain Retainer: Chain tensioning device complying with WCMA A100.1.

- b. Limit stops: Bead stops affixed to the chain maintain consistent shadeband alignment at the top and bottom of shade travel across multiple shades and help prevent shade damage resulting from unmanaged user control.
- 4. Accessories:
 - a. Fascia: Removable extruded aluminum fascia, size as required to conceal shade mounting, attachable to brackets without exposed fasteners.
 - 1) Finish: Clear anodized.
 - 2) Profile: Square.
 - 3) Configuration: Captured, fascia stops at captured bracket end.

1.7 INSTALLATION

- 1. Install shades level, plumb, square, and true per manufacturer's instructions and approved shop drawings.

END OF SECTION 12 24 13