

# Prineville Senior Center Rehabilitation

Prineville, Oregon



## Project Manual

April 5, 2019

## Technical Specifications

prepared for:  
city of prineville

prineville, or

prepared by:  
steele associates architects  
686 nw york dr. ste. 150  
bend, or 97703





**CITY OF PRINEVILLE  
INVITATION TO BID  
“PRINEVILLE SENIOR CENTER REHABILITATION”  
Solicitation Document#4005-18-19**

**DATE & TIME BID PROPOSALS ARE DUE:  
May 14, 2019 AT 2:00 PM PDST**

A Mandatory Pre-bid Meeting for this project will be held in main room at the Prineville Senior Center 180 NE Belknap Street, Prineville, OR on **May 1, 2019 at 2:00pm.**

**SUBMIT BID TO:**  
**Lori Ontko**  
City of Prineville  
387 NE Third Street  
Prineville, OR 97754  
541-447-2340

*“The City of Prineville is an equal opportunity provider and employer”*

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**LEGAL ADVERTISEMENT**  
**CITY OF PRINEVILLE**  
**INVITATION TO BID #4017-17-18**

Lori Ontko  
City of Prineville  
City Hall  
387 NE 3<sup>rd</sup> St  
Prineville, OR

The envelope shall be clearly marked:

Bid Proposal of (insert name of Contractor)  
**Prineville Senior Center Rehabilitation**

Bids will be publicly opened at 2:00 PM PDST on the 14th day of May 2019 and the apparent low bidder will be determined. It is anticipated that the City of Prineville Council will present the intent to award the contract at the Council meeting on the 28th day of May 2019. The start date for this project shall be no sooner than the 17th day of June 2019 with a completion date of no later than the 14th day of October 2019.

A Mandatory pre-bid meeting will be held promptly at 2:00 pm on the 1st day of May 2019 at the main room of the Prineville Senior Center, 180 NE Belknap St. in Prineville to review key project elements and address questions.

The work contemplated generally consists of furnishing all labor, equipment, supplies and materials to complete the Prineville Senior Center Rehabilitation project, but not limited to the following scope:

Exterior Work: Remove and replace asphalt parking lot, Remove underground storage tanks, Provide proper site drainage, Remove and replace concrete ramps and stairs, remove and replace handrails, Re-roof building, Remove and replace roof-top HVAC units, Remove and replace gutter / downspouts, Remove and replace storefront window system, Remove and replace cooler /freezer mechanical systems. *(Some items are Alternates)*

Interior Work: Remove asbestos flooring, Remove and replace flooring, Paint interior walls/columns, Remove and replace kitchen flooring, Remove and replace cooler flooring, retrofit light fixtures to LED, Remove and replace ACT ceilings, Remove and replace rubber floor base, Re-configure HVAC ductwork, Remove storefront door and replace with automatic sliding door, Remove and replace kitchen oven. *(Some items are Alternates)*

All work and materials must comply with the adopted City of Prineville Standard Specifications except as superseded in the following special conditions. Copies of the Standard Specifications are available at the City of Prineville Planning Department, City Hall for \$80.00. The Standard Specifications are also available on the City of Prineville website [www.cityofprineville.com](http://www.cityofprineville.com)

### Special Conditions:

The following additional specifications shall be followed for this project.

- a. Work under this contract will be funded in part with federal grant funds from the Oregon Community Development Block Grant.
- b. All work under this project is subject to federal Davis Bacon prevailing wage requirements as well as Oregon (BOLI) prevailing wage requirements. Contractors shall pay each worker employed in the performance of this contract not less than the higher wage rate for the type of work being performed as set forth in the "Prevailing Wage Rates for Public Works Contracts in Oregon" or the applicable federal Davis Bacon Wage Decision. If the contractor fails to pay for labor and services, the City of Prineville can pay for them and withhold these amounts from payment to the contractor. The contractor must pay daily, weekly, weekend and holiday overtime as required. The City of Prineville will actively monitor work under this contract for compliance with state and federal prevailing wage requirements.
- c. Contractors that are debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in Federal contracts on the government-wide System for Award Management (SAM)([www.sam.gov/](http://www.sam.gov/)) are ineligible for work under this contract. Contractors and subcontractors shall be registered in SAM.gov site, which requires a Dun and Bradstreet Number (DUNS). The contractor shall furnish their DUNS # to the City of Prineville prior to the start of construction. The contractor shall document that subcontractors are registered in SAM.gov, and that subcontractors are not debarred from work under federal contracts. Contractor shall submit proof of subcontractors' SAM.gov registration at the time of subcontract signing.

The Engineer's estimate for this project is \$ 725,000.00

**Work under this contract will be funded in part with federal grant funds from the Oregon Community Development Block Grant program.**

PUBLISHED: Premier Builders Exchange

## BID SUBMITTAL CHECK LIST

**Bidders, please review your bid proposal packet before submitting. Have you included the following required forms?**

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- ☐ Bidder Responsibility Form (unless current form on file with City) **Section 5 (All Parts)**
- ☐ Include in bid packet a completely filled in “Bid schedule” – **Section 6**
- ☐ Include a completed and signed “Certification Form” - **Section 7**
- ☐ First Tier Sub-Contractor Disclosure Form (*may be included with Bid packet or submitted separately within two working hours after the advertised bid closing time as specified in the solicitation*). - **Section 8**
- ☐ Non-Collusion Affidavit - **Section 9**
- ☐ Drug Testing Policy - **Section 10**
- ☐ Bid Bond - **Section 11**



## SECTION 1 – INTRODUCTION

### 1.1 GENERAL INFORMATION

N/A

### 1.2 PROCUREMENT TIMELINE

The City reserves the right to modify this schedule at the City's discretion. Proper notification of changes will be made to all interested parties.

<b>Event</b>	<b>Completion Date &amp; Time</b>
Advertisement and Release of Solicitation	April 19, 2019
Mandatory Pre-bid	May 1, 2019 @ 2:00 PM
Davis Bacon Wage Decision Verification	May 4, 2019
Deadline for ITB Questions or Protests or Requests for Changes	May 6, 2019 @ 2:00 PM
Deadline for Submission of Bids	May 14, 2019 @ 2:00 PM
Notice of Intent to Award of Contract (City Council)	May 28, 2019 @ 6:30 PM
Start Date (After signed Contract)	June 17, 2019 or before
End Date (No Later than)	October 14, 2019

## SECTION 2 - SCOPE OF WORK/SPECIFICATIONS

### 2.1 SCOPE OF WORK

The work contemplated generally consists of furnishing all labor, equipment, supplies and materials to complete the **“Prineville Senior Center Rehabilitation”** as described below.

#### **Special Conditions:**

The following additional specifications shall be followed for this project.

- a. Work under this contract will be funded in part with federal grant funds from the Oregon Community Development Block Grant.
- b. All work under this project is subject to federal Davis Bacon prevailing wage requirements as well as Oregon (BOLI) prevailing wage requirements. Contractors shall pay each worker employed in the performance of this contract not less than the higher wage rate for the type of work being performed as set forth in the “Prevailing Wage Rates for Public Works Contracts in Oregon” or the applicable federal Davis Bacon Wage Decision. If the contractor fails to pay for labor and services, the City of Prineville can pay for them and withhold these amounts from payment to the contractor. The contractor must pay daily, weekly, weekend and holiday overtime as required. The City of Prineville will actively monitor work under this contract for compliance with state and federal prevailing wage requirements.
- c. Contractors that are debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in Federal contracts on the government-wide System for Award Management (SAM)([www.sam.gov/](http://www.sam.gov/)) are ineligible for work under this contract. Contractors and subcontractors shall be registered in SAM.gov site, which requires a Dun and Bradstreet Number (DUNS). The contractor shall furnish their DUNS # to the City of Prineville prior to the start of construction. The contractor shall document that subcontractors are registered in SAM.gov, and that subcontractors are not debarred from work under federal contracts. Contractor shall submit proof of subcontractors' SAM.gov registration at the time of subcontract signing.

All work and materials must comply with the adopted City of Prineville Standards and Specifications. Copies of the Standard and Specifications are available at the City of Prineville Planning Department, City Hall for \$80.00. The Standard and Specifications are also available on the City of Prineville website [www.cityofprineville.com](http://www.cityofprineville.com)

**The City of Prineville reserves the right to increase or decrease quantities without limit or to omit portions of the work without invalidating said bidder or re-negotiating the unit bid price.**

## **2.6 MANDATORY PRE-BID MEETING**

A Mandatory Pre-bid Meeting for this project will be held in the main room at the Prineville Senior Center located at 180 NE Belknap Street, Prineville, OR 97754 on **May 01, 2019 at 2:00 PM** to provide prospective bidders with the opportunity to ask questions related to the work under this contract.

Project coordinators and other technical experts will answer the questions posed during the meeting. Any information provided at the meeting that will change the requirements of the solicitation document must be issued in the form of an addendum to all eligible proposers. Additionally, it is required that substantive questions and resulting responses from the pre-submittal meeting be documented and provided to all eligible bidders in the form of an addendum.

## **2.7 ESTIMATED PROJECT COST**

The estimated cost for this project is \$ 725,000.00.

**Work under this contract will be funded in part with federal grant funds from the Oregon Community Development Block Grant program.**

## **2.8 SCHEDULE OF WORK**

The City expects the proposer selected for award of contract to start work as soon as a contract is signed and be completed by October 14, 2019.



## SECTION 3 – GENERAL INSTRUCTIONS TO BIDDERS

### 3.1 BID SUBMISSION REQUIREMENTS AND OPENING

- A. Submit a minimum of one original bid document. **Bids must be signed and submitted no later than 2:00 PM on May 14, 2019**, to the address below. The submission and signing of a bid shall indicate the intention of the contractor to adhere to the provisions described in this Invitation to Bid (ITB).
- B. Bid must be submitted in a sealed envelope and designated with bid title. The name and address of the bidder should appear on the outside of the envelope. The outside lower left-hand corner of the envelope should have the bid title and bid opening date and time.
- C. Responses shall be addressed and submitted as follows:  
All responses to this request that are mailed through the United States Postal Service shall be addressed to Lori Ontko, Contract Administrator, 387 NE Third Street, Prineville, OR 97754. Hand-delivered responses, or responses not sent through the USPS, shall be delivered to the City of Prineville City Hall - Utility Billing Counter, 387 NE Third Street, Prineville, OR 97754.
- D. A complete bid packet submittal shall contain the following
- Completed Bidders Responsibility Form- **Section 5 (All Parts)**
  - Completed Bid Schedule- **Section 6**
  - Signed and Dated Certification Form- **Section 7**
  - Completed First Tier Sub-Contractors Disclosure Form- **Section 8**
  - Completed Non-Collusion Affidavit- **Section 9**
  - Completed Drug Testing Form- **Section 10**
  - Completed Bid Bond Form – **Section 11**
- E. It is the bidder's responsibility to ensure that bids are received on or before the stated closing time. Bids received after the designated time and date will be returned unopened. **Facsimile bids shall not be accepted.** Bid opening shall take place at address listed above in the City Hall Council Chambers

### 3.2 EXECUTION OF BID

Bids must be typewritten or prepared in ink. Bids shall be submitted on the "Bid Schedule" furnished by the City and must be signed in ink by an authorized representative of the bidder.

#### 3.2.1 Bid Security Requirements

Each Offer shall be accompanied by a cashier's check, irrevocable letter of credit (Bank), Certificate of Deposit NOTE: CD cannot be released by anyone other than the City of Prineville), or a Bid Bond, payable to the City of Prineville, in an amount equal to (5%) five percent of the total amount of the bid as guarantee that if awarded the Contract, the bidder will execute the Contract and give a performance bond and payment bond as required.

The successful bidder's security will be retained until he has executed a satisfactory contract and furnished a (100%) one hundred percent performance bond, and (100%) one hundred percent payment bond, and provide the required proof of insurance.

Bid Security shall be furnished to the City of Prineville as security against the failure of the undersigned to comply with all requirements within the time frames established subsequent to notification of award.

The Owner reserves the right to hold the bid security of the lowest three bidders until the successful bidder has executed a Contract and furnished a 100% percent performance bond and a (100%) one hundred payment bond.

Should the successful bidder decline to execute a written contract and furnish satisfactory bonds after his bid has been accepted, the bid security shall be forfeited as liquidated damages.

### **3.3 CONFORMANCE TO BID SPECIFICATIONS AND REQUIREMENTS**

Bids must conform to the specifications and requirements of the Invitation to bid, which are hereby made a part of this contract.

### **3.4 SILENCE OF SPECIFICATIONS**

The apparent silence of the ITB specifications as to any detail, or the apparent omission of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and that only materials and workmanship of first quality are to be used.

### **3.5 INTERPRETATIONS AND ADDENDA**

All questions regarding this project solicitation shall be directed to Chris Thome, AIA – Project Manager-Steele Associates Architects LLC, in writing to [cthome@steele-arch.com](mailto:cthome@steele-arch.com). If necessary, interpretations or clarifications in response to such questions will be made by issuance of an addendum to all prospective Bidders within a reasonable time prior to proposal closing, but in no case less than 72 hours before the proposal closing. If an addendum is necessary after that time, the City will extend the closing date.

Any new Addenda can be obtained at the following Plan Centers.

Premier Builders Exchange at <http://premierbx.com> (541) 389-0123

Email [admin@plansonfile.com](mailto:admin@plansonfile.com) and facsimile (541) 389-1549.

Bidders are responsible for checking regularly until closing to avoid missing any Solicitation Amendments. Bidders shall visit the websites in order to receive any addenda issued for this specific solicitation document.

Any addenda issued as a result of any change in the ITB must be acknowledged on the “Certification Form” and submitted with bid.

**Only questions answered by formal written addenda are binding.** Oral and other interpretations or clarifications are without legal effect.

### **3.6 PROTESTS**

Address any protests to:

City of Prineville

Lori Ontko, Procurement/Contract Administrator

387 NE Third Street

Prineville, OR 97754

Mark the outside of the envelope with the following information:

## **Request for Change or Protest with name of solicitation and the closing date**

### **3.6.1 Specification/Term Protest**

Ambiguities or problems with this ITB, its contract terms or specifications may be resolved by asking questions, seeking clarification, requesting changes or by filing a formal protest. Information provided below describes the appropriate process to pursue these options, should the need arise.

### **3.6.2 ITB Protest or Request for Change of Specifications or Terms**

A bidder who believes any specifications or terms detailed in this ITB (including its Addenda, if any) are unnecessarily restrictive or limit competition may submit a protest or request for change, in writing, to the Procurement/Contract Administrator. A request for change regarding the terms of this ITB may be submitted via facsimile. Any protest or request for change regarding the terms of this ITB shall include the reasons for the protest or request and shall detail any proposed changes to the specifications or terms. The Procurement/Contract Administrator shall respond to any protest or request for change and, where appropriate, shall issue any revisions, substitutions, or clarification via addenda to all interested Bidders. To be considered, protests or requests for change regarding the terms of this ITB must be received by **2:00 PM on May 6, 2019**. If a timely protest or request for change regarding the terms of this ITB is received, the bid opening date may be extended if necessary to allow consideration of the protest or request for change and issuance of any necessary addenda to the solicitation documents.

### **3.6.3 Notice of Intent to Award**

City shall notify contract bidders or proposers by e-mail or fax of City's notice of intent to award a contract (hereafter "Notification of Intent"). The Notification of Intent shall serve as notice to all bidders or proposers of the City's final decision to award contract.

### **3.6.4 Intent to Award Protest**

Adversely affected or aggrieved Bidders shall have seven (7) calendar days from the date of the Notice of Intent-to-Award which to file a written protest. Protests submitted after that date shall not be accepted. Protests shall specify the grounds upon which the protest is based. (Refer to ORS 279B.410.) Failure to so protest shall be considered the Bidder's failure to pursue an administrative remedy made available to the Bidder by the City. City intends to respond in writing to properly-filed intent-to-award protests submitted by adversely affected or aggrieved Bidders. Any response provided by City, however, is not intended to, and may not in and of itself constitute, confirmation that the Bidder is in fact adversely affected or aggrieved and therefore entitled to protest intent to award. After expiration of the seven (7) calendar-day intent-to-award protest period and resolution of all protests, City intends to proceed with the final award.

## **3.7 COST OF PREPARING A BID**

The City shall not pay any costs incurred by Bidder in the submission or presentation of a bid, or in making the necessary studies for the preparation thereof.

## **3.8 BID VALIDITY PERIOD**

All bids received shall be valid and irrevocable for a period of sixty (60) days from the date of opening.

## **3.9 RESIDENT BIDDER**

A resident bidder means a bidder that has paid unemployment taxes or income taxes in this state during the

12 calendar months immediately preceding submission of the bid and has a business address in this state as defined in ORS 279A.120(1).

As a public contracting agency, the City shall prefer goods or services that have been manufactured or produced in this state if price, fitness, availability and quality are otherwise equal.

### **3.10 PREVAILING RATE OF WAGES**

All work under this project is subject to federal Davis Bacon prevailing wage requirements as well as Oregon (BOLI) prevailing wage requirements. Contractors shall pay each worker employed in the performance of this contract not less than the higher wage rate for the type of work being performed as set forth in the "Prevailing Wage Rates for Public Works Contracts in Oregon" or the applicable federal Davis Bacon Wage Decision. If the contractor fails to pay for labor and services, the City of Prineville can pay for them and withhold these amounts from payment to the contractor. The contractor must pay daily, weekly, weekend and holiday overtime as required. The City of Prineville will actively monitor work under this contract for compliance with state and federal prevailing wage requirements.

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870 for the installation portion of this project. Documents establishing these conditions, as determined by the Commissioner of the Bureau of Labor and Industries (BOLI) are identified below. Contractor shall pay workers at not less than the specified minimum hourly rate of wage and shall include that requirement in all subcontracts.

Each worker in each trade or occupation employed in the installation performance of the Contract, either by the Contractor, subcontractor or other person doing or contracting to do or contracting for the installation part of the work on the Contract, must be paid no less than the applicable state prevailing rate of wage, or the applicable federal prevailing rate of wage whichever is higher.

The state prevailing wage rates to be paid under the state prevailing wage rate law are set out in the BOLI Publication entitled "Prevailing Wage Rates for Public Works Contracts in Oregon" (Region 10) dated January 1, 2019. The state prevailing wage rate publication is available at <https://www.oregon.gov/boli/WHD/PWR/Pages/January-1%2c-2019-PWR-Rates-.aspx> BOLI staff is available to assist in determining the applicable wage rates by calling (971) 673-0839.

Federal prevailing wage provisions and rates to be paid are included in this document as Attachments "H" and "T".

### **3.11 BONDS**

There will be Bid, Performance and Payment Bonds required on this project.

### **3.12 NON-COLLUSION**

Bidder certifies that this bid has been arrived at independently and has been submitted without collusion designed to limit independent bidding or competition.

### **3.13 PUBLIC RECORD**

If it is necessary to submit trade secrets or other confidential information in order to comply with the terms and conditions of this ITB, Bidders shall label any information that it wishes to protect from disclosure to third parties as a trade secret under ORS 192.501(2) with the following: **"This material constitutes a trade secret under ORS 192.501(2) and is not to be disclosed except as required by law."** Each page containing the trade secret or other confidential information must be so marked.

The City shall take reasonable measures to hold in confidence all such labeled information but shall not be liable for release of any information when required by law or court order to do so, whether pursuant to the

Oregon Public Records Law or otherwise and shall also be immune from liability for disclosure or release of information under the circumstances set out in ORS 646.473(3).

In submitting a bid, each bidder agrees that the city may; (a) reveal any trade secret or other confidential materials contained in the bid to city staff and to any outside consultant or third party who is hired by the city and (b) post the bid on the city's intranet for purposes related to its evaluation. Furthermore, each bidder agrees to indemnify and hold harmless the city and each of its officers, employees, and agents from all costs, damages, and expenses incurred in connection with refusing to disclose any material that the bidder has designated as a trade secret and/or as confidential information. Any bidder that designates its entire proposal as a trade secret may be disqualified.

### **3.14 FEDERAL TAX ID REQUIRED**

A Contractor awarded a contract shall complete an IRS Form W-9 for the City and provide the City with either the Contractor's Social Security Number or federal taxpayer ID number. Social Security numbers provided pursuant to this requirement will be used for the administration of state, federal and local tax laws.

### **3.15 PRICE TO INCLUDE COST OF DELIVERY**

Unless otherwise stated, the bid price for each item shall include the cost of delivery of the item(s) and shall be FOB destination to any City facility.

### **3.16 ERRORS IN BIDS**

When an error(s) is made in extending total prices, the unit bid price will govern. Bidders are cautioned to recheck their bid for possible error(s). Error(s) discovered after opening cannot be corrected and the contractor will be required to perform if their bid is accepted.

### **3.17 REJECTION OF BIDS**

The City reserves the right to reject any bid not in substantial compliance with the bid documents, or all prescribed public bidding procedures and requirements and may reject for good cause any or all bids upon a finding of the City that it is in the public interest to do so. Bids that contain unit prices that are obviously unbalanced shall be considered irregular and may be rejected if rejection is in the best interest of the City.

### **3.18 QUALITY**

All materials used for the manufacture or construction of any supplies, materials or equipment covered by this bid shall be new (unless otherwise specified), the latest model, of the best quality and highest-grade workmanship.

### **3.19 PREFERENCE FOR RECYCLED MATERIALS AND SUPPLIES**

As required by ORS 279A.125, the City shall give preference to materials and supplies manufactured from recycled materials if, the recycled product is available, it meets the requirements sets forth in the Specifications and Additional Contract Terms, the product can be substituted for a comparable non-recycled product and the cost of the product does not exceed the cost of non-recycled products by more than five (5) percent.

### **3.20 FORM OF CONTRACT**

The City will issue a Construction Contract which will incorporate the terms and conditions from this bid document, as well as from the successful bidder's response. **Bidders taking exception to any of the contract terms shall submit a request for change or their exceptions will be deemed waived.**

### **3.21 INSURANCE REQUIREMENTS**

Refer to Section G in the attached Construction Contract for the insurance requirements that will apply to this project.

### **3.22 AVAILABILITY OF FUNDS**

City has sufficient funds currently available and authorized for expenditure to finance costs of this Contract within City's current fiscal period; provided, however, that continuation or extension of the Contract after the end of the fiscal period in which this Contract is written is contingent upon a new appropriation for each succeeding fiscal period. If sufficient funds are not provided in future City Council-approved budgets of City (or from applicable federal, state, or other sources) to permit City in the exercise of its reasonable administrative discretion to continue this Contract, or if City abolishes the program for which benefit this Contract was executed, City may terminate this Contract without further liability by giving Contractor not less than 30 days' notice. In determining the availability of funds, City may use the annual budget adopted for it by its City Council.

### **3.23 NONDISCRIMINATION**

The successful contractor agrees that, in performing the work called for by this solicitation and in securing and supplying materials, contractor shall comply with all federal, state and local civil rights and rehabilitation laws prohibiting discrimination because of race, sex, national origin, religion, age or disability, and shall comply with all applicable provisions of ORS 279C.500 through 279C.565.

### **3.24 COMMITMENT TO SUSTAINABILITY**

In an effort to promote greater use of recycled and environmentally preferable products and to minimize waste, the City encourages all bids submitted in hard copy be prepared simply and economically. The use of special bindings, unnecessary colored displays and irrelevant promotional materials is neither required nor desired. Double-sided printing on recycled paper and/or the use of reusable products is preferred.

### **3.25 INVOICING**

### **3.26 CONTRACT ADMINISTRATOR**

The Contract Administrator will be Lori Ontko, who can be reached by phone at 541-447-2340, or by email at [lontko@cityofprineville.com](mailto:lontko@cityofprineville.com).

### **3.27 RESERVATIONS OF RIGHTS**

City reserves all rights regarding the ITB, including, without limitation, the right to:

- Amend, delay or cancel the ITB without liability if City finds it is in the best interest of the City to do so (see generally ORS 279B.100);
- Obtain clarification of any point in bid proposal or obtain additional information necessary to properly evaluate a particular bid;
- Reject any or all bid proposals received upon finding that it is in the best interest of the City to do so (see generally ORS 279B.100);
- Waive any minor informality or non-conformance with the provisions or procedures of the ITB, and seek clarification of any bid proposal, if required;
- Reject any bid proposal that fails substantially to comply with all prescribed ITB procedures and requirements;

## **SECTION 4 - BID EVALUATION AND AWARD**

### **4.1 AWARD EVALUATION CRITERIA**

Award will be to the lowest responsive, responsible bidder(s) that meets all the bid requirements and specifications. Offers will be evaluated to identify the lowest responsive Offer submitted by a responsible bidder and not otherwise disqualified. Adjustments made to account for reciprocal preferences will be for bid evaluation purposes only. No such adjustments shall operate to amend Bidder's Offer or any Contract awarded pursuant thereto.

“Within two working hours after the date and time of the deadline when the bids are due to the public contracting agency for a public improvement, a bidder shall submit to the public contracting agency a disclosure of the first-tier subcontractors that: (A) will be furnishing labor or will be furnishing labor and materials in connection with the public improvement; and (B) will have a contract value that is equal to or greater than five percent of the total project bid or \$15,000, whichever is greater, or \$350,000 regardless of the percentage of the total project bid.”

### **RESPONSIVENESS**

To be considered responsive, the Bidder must substantially comply in all material respects with applicable solicitation procedures and requirements and the solicitation documents. In making such evaluation, City of Prineville may waive minor informalities and irregularities.

### **RESPONSIBILITY**

Prior to award of a Contract, City of Prineville will evaluate whether the apparent successful Bidder meets the applicable standards of responsibility identified in OAR 137-049-0390. In doing so, City of Prineville may investigate Bidders and request information in addition to that already required in the ITB, when City of Prineville, in its sole discretion, considers it necessary.

### **4.2 NOTICE OF INTENT TO AWARD**

The notice of Intent to award shall be posted on the Central Oregon Builder's Exchange.

### **4.3 TERM OF CONTRACT**

The contract as a result of this procurement process is a one-time purchase.





## **BIDDER SUBMITTAL FORMS**



## SECTION 5 - PART I

### BIDDER RESPONSIBILITY FORM (CONTRACTOR'S QUALIFICATIONS AND FINANCIAL INFORMATION)

#### INSTRUCTIONS

1. The information provided in this form is part of the City's inquiry concerning bidder responsibility. Please print clearly or type. If you need more space, use plain paper.
2. Answer all questions. Submission of a form with unanswered questions, incomplete or illegible answers may result in a finding that you are not a responsible bidder.
3. Submit completed bidder responsibility form with bid proposal.

#### SECTION I – GENERAL INFORMATION

1. BIDDER'S NAME AND ADDRESS:	2. TELEPHONE, FAX AND EMAIL:  (a) TELEPHONE:  (b) FAX:  (c) EMAIL:
3. TAXPAYER ID NUMBER:	4. DATE AND STATE ORGANIZATION FORMED:
5. CONTRACTORS CONSTRUCTION BOARD LICENSE NO.:	6. TRADE STYLE NAME:
7. KIND OF PRODUCT OR SERVICE PROVIDED:	
8. FORMER BUSINESS NAME(S):	9. KIND OF BUSINESS (check one): (a) <input type="checkbox"/> MANUFACTURER (b) <input type="checkbox"/> CONTRACTOR (c) <input type="checkbox"/> WHOLESALE (d) <input type="checkbox"/> RETAILER (e) <input type="checkbox"/> OTHER (Specify)
10. PARENT COMPANY NAME AND ADDRESS (If applicable):	12. BUSINESS ORGANIZATION (check one) (a) <input type="checkbox"/> CORPORATION (b) <input type="checkbox"/> LIMITED LIABILITY COMPANY (c) <input type="checkbox"/> PARTNERSHIP (d) <input type="checkbox"/> SOLE PROPRIETORSHIP (e) <input type="checkbox"/> JOINT VENTURE (f) <input type="checkbox"/> OTHER (Specify)

## PART II – CONSTRUCTION/SERVICE CONTRACTS INFORMATION

*(Public Buildings Construction/Service and Infrastructure Construction Contracts Only)*

### LARGEST JOBS YOU HAVE COMPLETED IN THE LAST FIVE YEARS AS THE PRIME CONTRACTOR

ITEM	13. JOB 1	14. JOB 2
A. Name of Project		
B. Location		
C. Contact's Name		
D. Supervisor Name		
E. Address	STREET ADDRESS	
	CITY	STATE    ZIP CODE
F. Telephone		
G Type of Work		
H. Contract Amt. (\$)		
I. Amount Sublet(\$)		
J. Type of Contract:	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum
K. Estimated Completion Date		
ITEM	15. JOB 3	16. JOB 4
A. Name of Project		
B. Location		
C. Contact's Name		
D. Supervisor Name		
E. Address	STREET ADDRESS	
	CITY	STATE    ZIP CODE
F. Telephone		
G. Type of Work		
H. Contract Amt. (\$)		
I. Amount Sublet(\$)		
J. Type of Contract:	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum
K. Estimated Completion Date		
ITEM	17. JOB 5	18. JOB 6
A. Name of Project		
B. Location		
C. Contact's Name		
D. Supervisor Name		
E. Address	STREET ADDRESS	
	CITY	STATE    ZIP CODE
F. Telephone		
G. Type of Work		
H. Contract Amt. (\$)		
I. Amount Sublet(\$)		
J. Type of Contract:	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum
K. Estimated Completion Date		

# LARGEST JOBS YOU HAVE COMPLETED IN THE LAST FIVE YEARS AS A SUB CONTRACTOR

ITEM	19. JOB 1	20. JOB 2
A. Name of Project		
B. Location		
C. Contact's Name		
D. Supervisor Name		
E. Address	STREET ADDRESS	STREET ADDRESS
	CITY STATE ZIP CODE	CITY STATE ZIP CODE
F. Telephone		
G. Type of Work		
H. Contract Amt. (\$)		
I. Amount Sublet(\$)		
J. Type of Contract:	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum
K. Estimated Completion Date		
ITEM	21. JOB 3	22. JOB 4
A. Name of Project		
B. Location		
C. Contact's Name		
D. Supervisor Name		
E. Address		STREET ADDRESS
	CITY STATE ZIP CODE	CITY STATE ZIP CODE
F. Telephone		
G. Type of Work		
H. Contract Amt. (\$)		
I. Amount Sublet(\$)		
J. Type of Contract:	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum
K. Estimated Completion Date		
ITEM	23. JOB 5	24. JOB 6
A. Name of Project		
B. Location		
C. Contact's Name		
D. Supervisor Name		
E. Address	STREET ADDRESS	STREET ADDRESS
	CITY STATE ZIP CODE	CITY STATE ZIP CODE
F. Telephone		
G. Type of Work		
H. Contract Amt. (\$)		
I. Amount Sublet(\$)		
J. Type of Contract:	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum	<input type="checkbox"/> Itemized Bid or <input type="checkbox"/> Lump Sum
K. Estimated Completion Date		

### SECTION III - EXPERIENCE AND QUALIFICATIONS

25. Is your company a resident Oregon bidder as defined by ORS 279A.120? ☐ Yes. ☐ No.

Note: "Resident bidder" means a bidder that has paid unemployment taxes or income taxes in this state during the 12 calendar months immediately preceding submission of the bid, has a business address in this state, and has stated in the bid whether the bidder is a "resident bidder."

26. Your company shall agree to and comply with applicable federal Davis Bacon wage rates and provisions, and state of Oregon prevailing wage provisions of ORS 279C.838, ORS 279C.840-279C.870 for any completed public works project. ☐ Yes. ☐ No.

#### LIST COMPANIES FROM WHOM YOU OBTAIN SURETY BONDS

ITEM	27. SURETY COMPANY 1			28. SURETY COMPANY 2		
A. Company Name						
B. Contact's Name						
C. Telephone	AREA CODE	NUMBER	EXT.	AREA CODE	NUMBER	EXT.
D. Fax	AREA CODE	NUMBER		AREA CODE	NUMBER	
E. Address	STREET ADDRESS			STREET ADDRESS		
	CITY	STATE	ZIP CODE	CITY	STATE	ZIP CODE
33 PRESENT AMOUNT OF BONDING COVERAGE (\$)	34. HAS YOUR APPLICATION FOR SURETY BOND EVER BEEN DECLINED (If Yes, please provide detailed information in Remarks)  <input type="checkbox"/> YES <input type="checkbox"/> NO			35. DURING THE PAST 2 YEARS, HAVE YOU BEEN CHARGED WITH A FAILURE TO MEET THE CLAIMS OF YOUR SUBCONTRACTORS OR SUPPLIERS (If Yes, please provide detailed information in Remarks)  <input type="checkbox"/> YES <input type="checkbox"/> NO		

### SECTION IV – RELIABILITY AND REFERENCES

29. List six references, three of whom are project owners and three of whom are subcontractors. Provide the name of each reference, the reference's telephone number and the name of reference's business or employer. References may be contacted to discuss submitting contractor's qualifications.

ITEM	30. Reference – Project Owner			31. Reference – Project Owner		
A. Name						
B. Business or Employer						
C. Telephone	AREA CODE	NUMBER	EXT.	AREA CODE	NUMBER	EXT.
ITEM	32. Reference – Project Owner			33. Reference – Subcontractor		
A. Name						
B. Business or Employer						
C. Telephone	AREA CODE	NUMBER	EXT.	AREA CODE	NUMBER	EXT.
ITEM	34. Reference – Subcontractor			35. Reference – Subcontractor		
A. Name						
B. Business or Employer						
C. Telephone	AREA CODE	NUMBER	EXT.	AREA CODE	NUMBER	EXT.

36. Has your company ever been declared in breach of any contract for unperformed or defective work?

☐ Yes. ☐ No.

If "yes," explain. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

37. Has any employee or agent of your company ever been convicted of a criminal offense arising out of obtaining, attempting to obtain, or performing a public or private contract or subcontract? ☐ Yes. ☐ No.

If "yes," explain. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

38. Has any employee or agent of your company been convicted under state or federal law of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property or any other offense indicating a lack of business integrity or business honesty? ☐ Yes. ☐ No.

If "yes," explain. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

39. Has your company or any employee or agent of your company been convicted under state or federal antitrust laws? ☐ Yes. ☐ No.

If "yes," explain. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

40. Has any Officer or Partner of your organization ever been an Officer or Partner of another Organization that failed to complete a construction contract? ☐ Yes. ☐ No.

If "yes," explain. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## SECTION V – FINANCIAL RESOURCES

41. Indicate the total amount of work, expressed in dollars, your company reasonably believes it is capable of bonding at any one time: \$ \_\_\_\_\_. What portion of this amount remains available at time of completion of this form? \$ \_\_\_\_\_.

42. Has your firm ever been at any time in the last ten years the debtor in a bankruptcy case? ☐ Yes. ☐ No.

If "yes," explain. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

43. Does your firm have any outstanding judgments pending against it? ☐ Yes. ☐ No.

If "yes," explain. \_\_\_\_\_

- 
44. In the past ten years, has your firm been a party to litigation, arbitration or mediation where the amount in dispute exceeded \$25,000? ☐ Yes. ☐ No.

If "yes," explain. (Include court, case number and party names.) \_\_\_\_\_

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45. In the past ten years, has your firm been a party to litigation, arbitration or mediation on a matter related to payment to subcontractors or work performance on a contract? Check "yes" even if the matter proceeded to arbitration or mediation without court litigation. ☐ Yes. ☐ No.

If "yes," explain. \_\_\_\_\_

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46. Have you or any of your affiliates discontinued business operation with outstanding debts? ☐ Yes ☐ No.

If "yes," explain. \_\_\_\_\_

---

### SECTION VI – KEY PERSONNEL

47. List the principal individuals of your company, their current job title, the total years of experience they have in the construction industry and their current primary responsibility for your company. Corporations list current officers and those who own 5% or more of the corporation's stock. Limited liability companies list members who own 5% or more of company. Partnerships list all partners. Joint ventures list each firm that is a member of the joint venture and the percentage of ownership the firm has in the joint venture.

ITEM	48. Principal Individual	49. Principal Individual
A. Name		
B. Position		
C. Years in Construction		
D. Current Primary Responsibility		
ITEM	50. Principal Individual	51. Principal Individual
A. Name		
B. Position		
C. Years in Construction		
D. Current Primary Responsibility		

(Provide attachment if additional space required.)



## SECTION VII – EQUIPMENT

52. List major items of equipment your company owns or has available for long-term use on the proposed work.

ITEM	53. Equipment					54. Equipment				
A. Description										
B. Capacity of items										
C. Condition										
D. Quantity	Qty.	Own <input type="checkbox"/>	Rent <input type="checkbox"/>	Lease <input type="checkbox"/>	Age in Years	Qty.	Own <input type="checkbox"/>	Rent <input type="checkbox"/>	Lease <input type="checkbox"/>	Age in Years

ITEM	55. Equipment					56. Equipment				
A. Description										
B. Capacity of items										
C. Condition										
D. Quantity	Qty.	Own <input type="checkbox"/>	Rent <input type="checkbox"/>	Lease <input type="checkbox"/>	Age in Years	Qty.	Own <input type="checkbox"/>	Rent <input type="checkbox"/>	Lease <input type="checkbox"/>	Age in Years

ITEM	57. Equipment					58. Equipment				
A. Description										
B. Capacity of items										
C. Condition										
D. Quantity	Qty.	Own <input type="checkbox"/>	Rent <input type="checkbox"/>	Lease <input type="checkbox"/>	Age in Years	Qty.	Own <input type="checkbox"/>	Rent <input type="checkbox"/>	Lease <input type="checkbox"/>	Age in Years

(Provide attachment if additional space required.)

## SECTION VIII – ADDITIONAL REMARKS

*List the question each additional remark relates to. If more space needed, attach additional sheet(s) and check the following:*  
*Additional pages are attached to this Bidder Responsibility Form: ☐*

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## SECTION IX – DECLARATION AND SIGNATURES

The undersigned hereby declares that the he or she is duly authorized to complete and submit this Bidder Responsibility Form and that the statements contained herein are true and correct as of the date set forth below. Incomplete, incorrect or misleading information will be reason for a determination by City of non-responsibility.

Date: \_\_\_\_\_

For: \_\_\_\_\_

**Company Name (Please type or print)**

By: \_\_\_\_\_

(Signature of authorized official)

Printed Name: \_\_\_\_\_

(Please type or print)

Title: \_\_\_\_\_



## SECTION 6 - BID SCHEDULE FOR BID PROPOSAL

### CITY OF PRINEVILLE “PRINEVILLE SENIOR CENTER REHABILITATION”

**Company Name:** \_\_\_\_\_

**BID PRICES TO COVER ENTIRE WORK:** All bid prices shall be bid to include all materials, labor, etc. Bidder shall enter in the appropriate spaces all information requested on the Bid Schedule.

---

**BASE BID:** Remodel Senior Center- parking lot, canopies, sidewalks, ramps, handrails, asbestos removal, new roof, new roof top HVAC units, new flooring, new interior paint, etc. \$ \_\_\_\_\_ (Numbers)  
( \_\_\_\_\_ Dollars & \_\_\_\_\_ cents)

(Total Bid Amount shall be presented both in numbers and in words. In the event of discrepancy, the amount stated in words shall control.)

---

**Alternate #1:** Remove and Replace Kitchen Oven: \$ \_\_\_\_\_ (Numbers)  
( \_\_\_\_\_ Dollars & \_\_\_\_\_ cents)

(Total Bid Amount shall be presented both in numbers and in words. In the event of discrepancy, the amount stated in words shall control.)

---

**Alternate #2:** Demolition / Removal of asphalt paving as indicated on Drawings. Replacement part of Base Bid. \$ \_\_\_\_\_ (Numbers)  
( \_\_\_\_\_ Dollars & \_\_\_\_\_ cents)

(Total Bid Amount shall be presented both in numbers and in words. In the event of discrepancy, the amount stated in words shall control.)

---

**Alternate #3:** Replace existing carpet with new carpet tiles: \$ \_\_\_\_\_ (Numbers)  
( \_\_\_\_\_ Dollars & \_\_\_\_\_ cents)

(Total Bid Amount shall be presented both in numbers and in words. In the event of discrepancy, the amount stated in words shall control.)

---

**Alternate #4:** Replace existing carpet with new LVT Flooring: \$ \_\_\_\_\_ (Numbers)  
( \_\_\_\_\_ Dollars & \_\_\_\_\_ cents)

(Total Bid Amount shall be presented both in numbers and in words. In the event of discrepancy, the amount stated in words shall control.)

---

**Alternate #5:** Retrofit Fluorescent light fixtures to LED: \$ \_\_\_\_\_ (Numbers)  
( \_\_\_\_\_ Dollars & \_\_\_\_\_ cents)

(Total Bid Amount shall be presented both in numbers and in words. In the event of discrepancy, the amount stated in words shall control.)

---

**Alternate #6:** Remove storefront assembly at NE corner. Replace with new storefront system and glazing:

\$ \_\_\_\_\_ (Numbers)

( \_\_\_\_\_ Dollars & \_\_\_\_\_ cents)

(Total Bid Amount shall be presented both in numbers and in words. In the event of discrepancy, the amount stated in words shall control.)

---

**Alternate #7:** Remove existing vestibule wall and door. Install automatic sliding door and wall:

\$ \_\_\_\_\_ (Numbers)

( \_\_\_\_\_ Dollars & \_\_\_\_\_ cents)

(Total Bid Amount shall be presented both in numbers and in words. In the event of discrepancy, the amount stated in words shall control.)

---

**Alternate #8:** Paint interior columns/pilasters a different color then the interior walls:

\$ \_\_\_\_\_ (Numbers)

( \_\_\_\_\_ Dollars & \_\_\_\_\_ cents)

(Total Bid Amount shall be presented both in numbers and in words. In the event of discrepancy, the amount stated in words shall control.)

---

**Alternate #9:** Remove and Replace Walk-in Cooler mechanical system:

\$ \_\_\_\_\_ (Numbers)

( \_\_\_\_\_ Dollars & \_\_\_\_\_ cents)

(Total Bid Amount shall be presented both in numbers and in words. In the event of discrepancy, the amount stated in words shall control.)

---

**Alternate #10:** Contech Subsurface Infiltration System. See civil drawings:

\$ \_\_\_\_\_ (Numbers)

( \_\_\_\_\_ Dollars & \_\_\_\_\_ cents)

(Total Bid Amount shall be presented both in numbers and in words. In the event of discrepancy, the amount stated in words shall control.)

BY: \_\_\_\_\_

Date: \_\_\_\_\_

TITLE: \_\_\_\_\_

## SECTION 7 - CERTIFICATION FORM

***FAILURE TO SUBMIT THIS FORM IN BID PROPOSAL PACKET WILL RESULT IN A NON-RESPONSIVE BID***

The undersigned agrees and certifies that he/she:

**1. Has received Addendum No(s) \_\_\_\_OF\_\_\_\_ (list all addenda received or write “N/A” if none).**

2. Has read and understands all the solicitation instructions, terms and conditions and construction specifications relevant to this project.

This construction effort will be executed with the highest level of customer service. Critical to that effort is planning of work sequence to minimize disruption and inconvenience during construction.

If awarded the contract and after work on the project has begun, bidder shall promptly refer any customer service issues to the Project Manager.

Bidder further acknowledges the importance of these provisions to the successful completion of this project, and agrees that if awarded this contract, bidder will promptly, efficiently and courteously carry out his/her responsibilities under the aforementioned specifications.

3. Is ☐/ is not ☐ (check applicable box) a “resident bidder” as defined by ORS 279A.120.

4. Has made or has caused to be made on proposer’s behalf an examination of the site of the proposed work and has made all investigations proposer deems necessary to determine the conditions to be encountered;

5. Is a duly authorized representative of the proposer, that the information provided in this proposal and accompanying materials is true and accurate, and that providing incorrect or incomplete information may be cause for proposal rejection and/or contract termination;

6. Is bound by and will comply with all requirements, specifications, and terms and conditions contained herein, and to the extent applicable, ORS 279C.838 or 279C.840 or 40 USC 3141 et seq. will be complied with;

7. Contractor is registered with the Construction Contractors Board, or the State Landscape Contractors Board, as specified in BPC 49-0230;

8. Contractor, unless contrary to federal law, Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work as described in ORS 701.005 under this Contract unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time they submit their bids to the Contractor;

9. Will contract with the City of Prineville, Oregon, in the form similar to that attached and furnish the designated item (s) and/or service(s) in accordance with the proposal and the contract.

10. Licensing per ORS 468A.720 (working with asbestos) is not required for this project.

Authorized Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Email: \_\_\_\_\_

Telephone #: \_\_\_\_\_

Cell #: \_\_\_\_\_



## **SECTION 8 – FIRST TIER-SUBCONTRACTOR DISCLOSURE REQUIREMENTS**

It is the Bidder's responsibility to determine all the documents that must be submitted to the City. For purposes of this document, "submitted" means "in the physical possession of the City of Prineville."

### **FIRST TIER SUBCONTRACTOR DISCLOSURE FORM TO BE SUBMITTED BY ALL BIDDERS NOT LATER THAN 4:00 P.M. THE DAY THE BID IS DUE**

In 2003, the Oregon Legislature revised ORS 279C.370, which provides, in part:

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

**The Bidder must disclose on the accompanying form the following information about their first-tier subcontracts either in its Bid submission or within two (2) working hours after the date and time of the deadline when bids are due:**

- 1) The subcontractor's name
- 2) Dollar value
- 3) The category of work that the subcontractor would be performing.

If the bidder will not be using any subcontractors that are subject to the above disclosure requirements, the bidder is required to indicate **"NONE"** on the accompanying form.

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

## SECTION 8 - FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

**FAILURE TO SUBMIT THIS FORM PER OR 97754 WILL RESULT IN A NON-RESPONSIVE BID**

**Project Name: "PRINEVILLE SENIOR CENTER REHABILITATION"**

Bid No.: 4005-18-19

Bid Closing Date: May 22, 2019

Time: 2:00 PM

**Submit this form at the City Hall Utility Billing Counter, located at Prineville City Hall 387 NE Third Street, Prineville, OR 97754 within two working hours after the advertised proposal closing time as specified in the Invitation to Bid. This form will be deemed received only when the City has marked the envelope with the date and time received. City will issue a written receipt on the proposer's request.**

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

Name	Dollar Value	Category of Work
1) _____ _____	\$ _____ _____	_____ _____
2) _____ _____	\$ _____ _____	_____ _____
3) _____ _____	\$ _____ _____	_____ _____
4) _____ _____	\$ _____ _____	_____ _____
5) _____ _____	\$ _____ _____	_____ _____

Form Submitted By (Proposal Name): \_\_\_\_\_

Contact Name: \_\_\_\_\_ Phone No.: \_\_\_\_\_

Email: \_\_\_\_\_



## **SECTION 9: INSTRUCTIONS FOR NON-COLLUSION AFFIDAVIT**

This Non-Collusion Affidavit is material to any contract awarded by the City of Prineville to a successful bidder. According to the Oregon Public Contracts and Purchasing Laws, a public contracting agency may reject any or all bids upon a finding of the agency that is in the public interest to do so. This agency finds that it is in the public interest to require the completion of the attached affidavit by potential contractors.

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

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

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

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

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

## SECTION 9: NON-COLLUSION AFFIDAVIT

**FAILURE TO SUBMIT THIS FORM IN BID PROPOSAL PACKET WILL RESULT IN A NON-RESPONSIVE BID**

CONTRACT # \_\_\_\_\_

STATE OF OREGON )

In )SS.

COUNTY OF \_\_\_\_\_)

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

I further state that:

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

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

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

(4) The bid of my firm is made in good faith and pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other non-competitive bid.

(5) \_\_\_\_\_, its affiliates, and subsidiaries, officers, directors and employees are not  
(NAME OF FIRM)

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

(6) I further state that \_\_\_\_\_ understands and acknowledges that the above  
(NAME OF FIRM)

representations are material and important, and will be relied on for the City of Prineville, Oregon in awarding the contract from which this bid is submitted. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from the City of Prineville, Oregon of the true facts relating to the submission of bids for the contract.

Name of Contractor: \_\_\_\_\_

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 2018.

(SEAL) \_\_\_\_\_  
NOTARY PUBLIC OF OREGON

My commission expires: \_\_\_\_\_

**SECTION 10 -DRUG TESTING POLICY**  
**“PRINEVILLE SENIOR CENTER REHABILITATION”**

***FAILURE TO SUBMIT THIS FORM IN BID PROPOSAL PACKET WILL RESULT IN A NON-RESPONSIVE BID***

The bidder states that provisions of ORS 279C.505 requiring a written employee drug testing program is in place for the Contractor’s employees that include , at the a minimum, the following :

The bidder states that provisions of ORS 279C.505 [Chapter 794.138] requiring a written employee drug-testing program is in place for the Contractor’s employees that include, at a minimum, the following:

- ☐ Drug testing for all new Employees working on the project site every 6 months on a random selection basis, and
- ☐ Testing of an Employee working on the project site when Contractor has a reasonable cause to believe the Subject Employee is under the influence of drugs, and
- ☐ Testing of an Employee working on the project site is involved in an incident causing injury requiring treatment by a physician, or damage to property or equipment.

COMPANY NAME \_\_\_\_\_

SIGNATURE \_\_\_\_\_

TITLE \_\_\_\_\_

DATE \_\_\_\_\_



## SECTION 11 – BID BOND FORM

***FAILURE TO SUBMIT THIS FORM IN BID PROPOSAL PACKET WILL RESULT IN A NON-RESPONSIVE BID***

KNOW ALL MEN BY THESE PRESENTS,

That \_\_\_\_\_, hereinafter called the PRINCIPAL, and \_\_\_\_\_, a corporation duly organized under the laws of the State of \_\_\_\_\_, having its Principal place of business at \_\_\_\_\_, in the State of Oregon, as SURETY, are held and firmly bound unto the City of Prineville, as OBLIGEE, hereinafter called the OWNER, in the penal sum of \_\_\_\_\_ dollars (\$ \_\_\_\_\_), for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS BOND ARE SUCH that, whereas the PRINCIPAL herein is submitting its bid proposal for the **“PRINEVILLE SENIOR CENTER REHABILITATION”**, said bid proposal, by reference thereto, being hereby made a part thereof.

NOW, THEREFORE, if the said bid proposal submitted by the said PRINCIPAL be accepted, and the contract be awarded to said PRINCIPAL, and performance and payment bonds as required by the bidding and Contract Documents within the time fixed by said documents, then this obligation shall be void; if the PRINCIPAL shall fail to execute the proposed Contract and furnish said bonds, the SURETY hereby agrees to pay to the OWNER the penal sum as liquidated damages.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 2019

\_\_\_\_\_  
Principal

\_\_\_\_\_  
By

\_\_\_\_\_  
Surety

\_\_\_\_\_  
By Attorney-in-Fact

(A certified copy of the agent's power-of-attorney must be attached hereto.)



## **SECTION 12 – DRAWING**

## **SECTION 12 – DRAWING LIST**

### **GENERAL**

- G0.01 COVER SHEET**
- G0.02 ADA REQUIREMENTS**

### **CIVIL**

- C0.0 COVER & CIVIL SHEET INDEX**
- C0.1 CIVIL NOTES / SPECIFICATIONS**
- C1.0 EXISTING CONDITIONS & DEMOLITION PLAN**
- C1.1 EROSION AND SEDIMENT CONTROL PLAN**
- C2.0 SITE AND UTILITY PLAN**
- C3.0 GRADING AND DRAINAGE PLAN**
- C3.1 GRADING AND DRAINAGE PLAN**

### **ARCHITECTURAL**

- A0.01 GENERAL NOTES, LEGENDS, ABBREVIATIONS**
- A0.02 CODE SHEET**
- A0.10 ASSEMBLY SHEET**
- A1.00 ARCHITECTURAL SITE PLAN**
- A1.10 EXISTING AND DEMOLITION FLOOR PLAN**
- A1.11 NEW FLOOR PLAN AND FINISH PLAN**
- A1.30 ROOF PLAN**
- A1.40 EXISTING & DEMOLITION REFLECTED CEILING PLAN**
- A1.41 NEW REFLECTED CEILING PLAN**
- A2.01 EXTERIOR ELEVATIONS**
- A4.10 ENLARGED STAIR / RAMP PLANS**
- A4.11 STAIR AND RAMP SECTIONS**
- A4.12 ENLARGED STAIR / RAMP PLANS**
- A4.13 STAIR AND RAMP SECTIONS**
- A4.14 ENLARGED STAIR / RAMP PLANS**
- A5.10 STAIR, RAILINGS, INTERIOR DETAILS**
- A5.20 ROOF AND EXTERIOR WALL DETAILS**
- A5.70 DOOR AND WINDOW DETAILS**
- A6.01 DOOR AND WINDOW SCHEDULES**

### **STRUCTURAL**

- S1.1 STRUCTURAL GENERAL NOTES**
- S1.2 STRUCTURAL SPECIFICATIONS**



- S2.1 FOUNDATION PLAN
- S2.2 ROOF FRAMING PLAN
- S3.1 STRUCTURAL DETAILS

#### **MECHANICAL**

- M1.00 SCHEDULES & NOTES
- M2.00 HVAC DEMOLITION PLAN
- M3.00 HVAC NEW FLOOR PLAN
- M4.00 HVAC ROOF PLAN
- M5.00 HVAC SPECIFICATIONS

#### **ELECTRICAL**

- E1.01 ELECTRICAL LEGENDS, SCHEDULES AND NOTES
- E2.01 FLOOR PLAN – ELECTRICAL DEMOLITION
- E3.01 FLOOR PLAN - ELECTRICAL
- E3.02 FLOOR PLAN – INTERIOR LIGHTING RETROFITS

**END OF SECTION**



## **SECTION 13 – ASBESTOS SURVEY 2003/2019**





PORTLAND  
SEATTLE  
VANCOUVER  
EUGENE  
BEND  
TRI-CITIES

April 30, 2003

Prineville Senior Center  
180 N. Belknap Street  
Prineville, OR 97754  
Attn: Dale Comini

Re: Prineville Senior Center Pre-Renovation Asbestos Survey  
PBS Project Number: 80054.000

Dear Ms. Comini:

On April 16, 2003 PBS Engineering and Environmental (PBS) performed an asbestos survey of the Prineville Senior Center located at 180 N. Belknap Street, in Prineville, Oregon. The survey was conducted in general accordance with Oregon Administrative Rule (OAR) 340-248-0270 and the PBS proposal dated February 28, 2003. Based on the information gathered during the site inspection and laboratory analysis results, this report contains the following information:

- A summary of asbestos-containing materials discovered during the inspection, including a material description, location of each identified asbestos-containing material, and the estimated quantity,
- Site Photos (Appendix A),
- Laboratory analysis reports and chain of custody forms (Appendix B),
- A sample inventory listing the sample number, location, material description, and laboratory analyses results (Appendix C), and
- Inspector Certifications (Appendix D)

## **SURVEY SCOPE**

PBS located suspect asbestos-containing materials within the interior of the building in areas expected to be affected by upcoming building renovations. According to HSR Architecture, the exterior of the building will not be impacted by the remodel and was not included in the scope of work. Suspect asbestos-containing materials may be present concealed within wall, ceiling, or floor spaces. If suspect materials are uncovered during demolition activities that are not identified in this report, testing should be performed prior to impact.

644 NE Greenwood Ave.  
Suite A  
Bend, OR 97701  
541.388.9290 PHONE  
541.382.5116 FAX

ENGINEERING AND ENVIRONMENTAL

[www.pbsenv.com](http://www.pbsenv.com)

Prineville Senior Center  
Re: Pre-Renovation Asbestos Survey  
PBS Project No. 80054.000  
April 30, 2003  
Page 2 of 5

PBS conducted a physical inspection of the Prineville Senior Center, compiled this report consistent with the survey scope, and certifies that the information is correct and accurate within the standards of professional quality and contractual obligations. This report includes the areas indicated by the client to be affected by upcoming renovations. Additional suspect materials may be present in areas not surveyed by PBS.

## **INSPECTION**

Asbestos sampling was conducted on April 16, 2003, by Jeff Heeren (Accreditation # IR-02-8438) and Matt Hutchison (Accreditation # IMR-03-7205) of PBS. Suspect asbestos-containing materials observed included vinyl sheet flooring, vinyl floor tile and mastic, gypsum wallboard and joint compound, molded cove base and mastic, lay-in ceiling tiles, and sprayed-on ceiling material. A total of 21 samples were collected and analyzed for asbestos content by Polarized Light Microscopy (PLM) with dispersion staining. Samples were forwarded to RJ Lee Group, Inc., San Leandro, California (NVLAP #101208-2) for analysis.

PBS investigated accessible areas inside the building to locate suspect asbestos-containing building materials (ACBM) that will be impacted by the renovation project. Suspect materials may also be present in concealed areas (e.g. behind walls). The inspection findings are presented below.

## **BUILDING DATA**

Prineville Senior Center  
180 N. Belknap Street  
Prineville, Oregon 97754  
Area: approximately 11,000 square feet

## **ASBESTOS MATERIALS**

The following materials tested positive for asbestos. Materials that had mixed results are considered positive. Materials not sampled may contain asbestos and should be tested to verify asbestos content prior to impact through demolition, renovation, etc.

(+) Tested Positive, (M) Mixed Results, (P) Presumed Positive, (T) Previously Tested Positive.

Type	Material	Location	Approximate Quantity (ft <sup>2</sup> )
+	Vinyl Sheet Flooring (4)	Recreation area, Soroptomists area, Storage area	4,050
+	Vinyl Sheet Flooring (2)	Dining area	3,750
+/+	Vinyl Sheet Flooring/Mastic (3)	Lounge, N. Corridors, Restrooms	1,500
+/-	Vinyl Floor Tile/Mastic (2)	Lounge, Crawlspace below Dining area	1,000
+	Sprayed-on Ceiling Material	Throughout Building	6,000

Beige-colored vinyl sheet flooring (4) was observed under a layer of vinyl floor tile (1) in the recreation area, soroptomist area, and storage room on the south side of the building. The overlying vinyl floor tile and mastic tested negative for asbestos. In the southwest meeting room, carpeting also covers the tile and sheet flooring.

Gray-colored vinyl sheet flooring (2) was observed in the dining area. A layer of gray aggregate-pattern sheet flooring (1) and particleboard overlie this asbestos-containing material. The top layer of gray aggregate-pattern sheet vinyl (1) tested negative for asbestos.

Brown sheet vinyl flooring (3) and associated brown mastic was observed in the main lobby, north restrooms, and north hallways. This flooring underlies carpeting in the lobby area. In the lounge area the asbestos-containing sheet flooring (3) and mastic is covered by vinyl floor tile (1), which tested negative for asbestos.

The three types of vinyl sheet flooring that tested positive for asbestos were observed to be in fair to good condition. This type of flooring has a friable backing and is a fully regulated material.

Beige 9 X 9 floor tile (2) was observed in the lounge area and on a sub-floor in the crawl space below the dining area. In the lounge area, the tile is concealed by a layer of negative-testing 12 X 12 floor tile (1) and a layer of asbestos-containing sheet flooring (3). Mastic associated with the floor tile tested negative for asbestos. The material is considered non-friable in its present state, but would likely be rendered friable during removal.

Remnant sprayed-on ceiling material was observed in random locations above the drop ceiling throughout the building. Historical photographs and interviews with persons familiar with the history of the building indicate that this material was applied directly to

lay-in ceiling tiles. The previous owner of the building reportedly removed the ceiling tiles approximately 15 years ago. Debris and over-spray from the original application were observed above the drop ceiling throughout the building. The material was consistently found on perimeter support columns above the drop ceiling. Remnant debris was also observed in the crawlspace below the dining area, in an interstitial space behind closets in the Soroptomist area, and on the T-grid that supports the drop ceiling. Samples of this material consistently indicated high concentrations of asbestos. The material is friable and access above the drop ceiling should be restricted until removal can be performed.

The Department of Environmental Quality (DEQ) and Oregon Occupational Safety and Health Administration (OSHA) have developed specific rules regarding the maintenance and removal of asbestos-containing materials. The following Oregon Administrative Rules are applicable:

- OSHA: OAR-437, 1926.1101
- DEQ: OAR-340, Division 248

#### **MATERIALS THAT TESTED NEGATIVE FOR ASBESTOS**

The following materials tested negative based on analysis by an NVLAP participating laboratory. Although no asbestos was detected, it is possible that further sampling could indicate asbestos content.

<b>Material</b>	<b>Location</b>
Lay-in Ceiling Tiles	Throughout Building
Beige 12 X 12 Vinyl Floor Tile (1)	Lounge, Offices, Recreation area, Soroptomist area, Storage Rooms
Covebase (1) and mastic-Gray 4	SW Corner Meeting Room, Kitchen area
Vinyl Sheet Flooring (1)- gray aggregate pattern	Dining area, Kitchen area
Covebase (2) and mastic- brown 4	North Restrooms, Corridors, Lounge
Gypsum Wallboard and Joint Compound	Throughout Building
Covebase (3) and mastic- white 4	Dining area



Prineville Senior Center  
Re: Pre-Renovation Asbestos Survey  
PBS Project No. 80054.000  
April 30, 2003  
Page 5 of 5

If you have any questions or concerns regarding this report, please contact Jeff Heeren at (541) 388-9290. PBS appreciates the opportunity to work with you on this project.

Sincerely,

Jeff Heeren  
Prime Inspector  
Accreditation # IR-02-8438

	<u>4-30-03</u>
Signature	Date

Reviewed by: SD and TAS

#### **APPENDICES**

Appendix A- Site Photos  
Appendix B- Laboratory Data and Sample Chain of Custody  
Appendix C- Bulk Sample Inventory  
Appendix D- Building Inspector Certifications



PHOTO 1: Negative Testing 12" Vinyl Floor Tile in Storage Area  
Overlies Asbestos-Containing Sheet Flooring (4)



PHOTO 2: Layered Floor System in Dining Area  
Top Sheet Vinyl layer (1) and Particleboard conceal Asbestos-Containing Sheet Vinyl (2)



PHOTO 3: Asbestos-containing Vinyl Sheet Flooring (3)  
Janitorial Closet



PHOTO 4: Asbestos-containing 9" Floor Tile and Ceiling Material debris  
Crawl Space below Dining Area



PHOTO 5: Asbestos-containing Sprayed-on Ceiling Material Debris  
Above Drop Ceiling in Kitchen Area



PHOTO 6: Remnant Asbestos-containing Sprayed-on Ceiling Material  
Above Drop Ceiling- South Perimeter Column



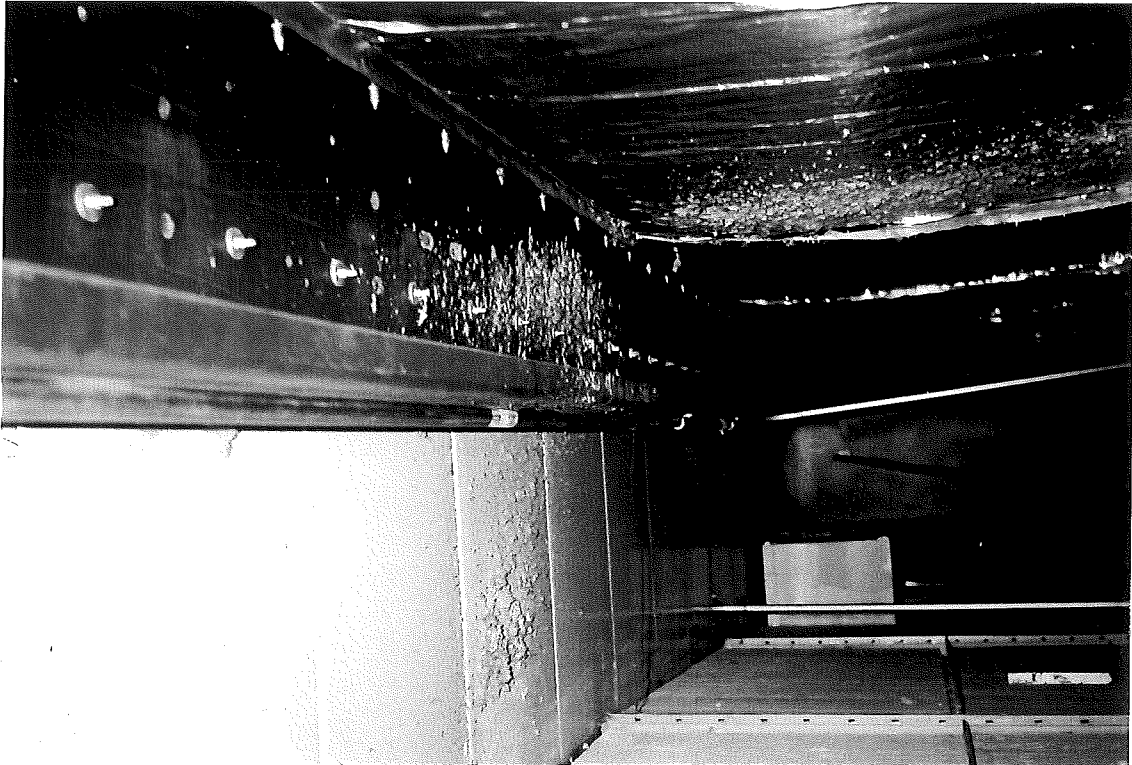


PHOTO 7: Asbestos-containing Sprayed-on Ceiling Material over spray  
Above Drop Ceiling- Dining Area



PHOTO 8: Remnant Asbestos-containing Sprayed-on Ceiling Material  
Perimeter Column Soffit

# Test Report - PBS Environmental - Bend

## Polarized Light Microscopy Analysis Results

Project AOC304318

Sample Number / Sample Appearance	Client Sample Number	Chrysotile	Amosite	Crocidolite	Anthophyllite	Tremolite	Actinolite	Cellulose	Wool	Nonasbestos				NonFibrous Run Date
										Mineral	Fibrous	Synthetic	Other	
										Glass	Fibers	Fibers	Material	Analyst
0037375CPL	80054.000-001	-	-	-	-	-	-	40 %	30 %	-	-	-	30 %	4/22/03
White ceiling tile								NFM: Qtz, Per, Carb, Opaq, Misc. Part.					Homogeneous	SS
0037376CPL	80054.000-002	10 %	-	-	-	-	-	<1 %	-	-	-	-	90 %	4/22/03
Grey floor tile ; blk. mastic ; beige linoleum								NFM: Qtz, Tar, Carb, Binder, Opaq, Misc. Part.					Non Homogeneous	SS
Layer Content:														
0037377CPL	80054.000-003	-	-	-	-	-	-	-	-	-	-	-	100 %	4/22/03
Grey baseboard ; tan mastic								NFM: Qtz, Carb, Binder, Opaq, Misc. Part.					Non Homogeneous	SS
0037378CPL	80054.000-004	-	-	-	-	-	-	20 %	-	2 %	3 %	-	75 %	4/22/03
Grey linoleum ; tan mastic								NFM: Qtz, Carb, Binder, Opaq, Misc. Part.					Non Homogeneous	SS
0037379CPL	80054.000-005	30 %	-	-	-	-	-	1 %	-	-	-	-	69 %	4/22/03
Beige linoleum								NFM: Qtz, Carb, Binder, Opaq, Misc. Part.					Homogeneous	SS
0037380CPL	80054.000-006	30 %	-	-	-	-	-	1 %	-	-	-	-	69 %	4/22/03
Brown linoleum ; blk. mastic								NFM: Qtz, Tar, Carb, Binder, Opaq, Misc. Part.					Non Homogeneous	SS
Layer Content:														

Samples received on: Friday, April 18, 2003

RJ Lee Group, Inc.  
Bay Area Lab

530 McCormick Street  
San Leandro, CA 94577

Page: 1 of 4

Authorized Signature

Scott Stotler, Geologist

Tuesday, April 22, 2003

Phone (510) 567-0480

Fax (510) 567-0488

Date

# Test Report - PBS Environmental - Bend

## Polarized Light Microscopy Analysis Results

Project AOC304318

Sample Number / Sample Appearance	Client Sample Number	Chrysotile	Amosite	Crocidolite	Anthophyllite	Tremolite	Actinolite	Cellulose	Wool	Glass	Fibers	Other	NonFibrous	Run Date	Analyst
0037381CPL	80054.000-007	-	-	-	-	-	-	-	-	-	-	<1 %	99+ %	4/22/03	SS
Brown baseboard ; brn. mastic															
0037382CPL	80054.000-008	5 %	-	-	-	-	-	-	-	-	-	-	95 %	4/22/03	SS
Beige floor tile ; blk. mastic															
Layer Content: Floortile 5% Chrysotile ; Other Layer : None Detected															
0037383CPL	80054.000-009	-	50 %	-	-	-	-	30 %	-	-	-	-	20 %	4/22/03	SS
White insulation															
0037384CPL	80054.000-010	-	-	-	-	-	-	5 %	-	-	1 %	-	94 %	4/22/03	SS
White wallboard ; wht. comp															
Layer Content: NFM: Qtz, Carb, Opaq, Gyp, Mica, Misc. Part.															
0037385CPL	80054.000-011	10 %	-	-	-	-	-	<1 %	-	-	-	-	90 %	4/22/03	SS
Grye bascking ; beige floortile ; blk. mastic															
Layer Content: NFM: Qtz, Tar, Carb, Binder, Opaq, Misc. Part.															
Backing 60% Chrysotile ; Floortile 3% Chrysotile ; Other Layer : None Detected															
0037386CPL	80054.000-012	-	-	-	-	-	-	<1 %	-	-	-	-	99+ %	4/22/03	SS
Beige floor tile ; tan mastic															
Layer Content: NFM: Qtz, Tar, Carb, Binder, Opaq, Misc. Part.															
Non Homogeneous															

Samples received on: Friday, April 18, 2003

RJ Lee Group, Inc.  
Bay Area Lab

530 McCormick Street  
San Leandro, CA 94577

Page: 2 of 4

Authorized Signature

Date

Scott Stotler, Geologist  
Tuesday, April 22, 2003

Phone (510) 567-0480  
Fax (510) 567-0488

# Test Report - PBS Environmental - Bend

## Polarized Light Microscopy Analysis Results

### Project AOC304318

Sample Number / Sample Appearance	Client Sample Number	Chrysotile	Amosite	Crocidolite	Anthophyllite	Tremolite	Actinolite	Cellulose	Wool	Nonasbestos				Material	Analyst	Run Date
										Fibers	Glass	Fibers	Other			
0037387CPL Grey insulation	80054.000-013	-	90 %	-	-	-	-	<1 %	NFM: Qtz, Carb, Opaq, Misc. Part.	-	-	-	-	10 %	4/22/03	SS
0037388CPL Grey insulation	80054.000-014	-	90 %	-	-	-	-	<1 %	NFM: Qtz, Carb, Opaq, Misc. Part.	-	-	-	-	10 %	4/22/03	SS
0037389CPL Grey insulation	80054.000-015	-	90 %	-	-	-	-	<1 %	NFM: Qtz, Carb, Opaq, Misc. Part.	-	-	-	-	10 %	4/22/03	SS
0037390CPL White wallboard ; wht. comp	80054.000-016	-	-	-	-	-	-	5 %	NFM: Qtz, Carb, Opaq, Gyp, Mica, Misc. Part.	-	-	-	-	95 %	4/22/03	SS
0037391CPL White wallboard ; wht. comp	80054.000-017	-	-	-	-	-	-	5 %	NFM: Qtz, Carb, Opaq, Gyp, Mica, Misc. Part.	-	-	-	-	94 %	4/22/03	SS
0037392CPL White ceiling tile	80054.000-018	-	-	-	-	-	-	40 %	NFM: Qtz, Per, Carb, Opaq, Misc. Part.	-	-	-	-	30 %	4/22/03	SS

Samples received on: Friday, April 18, 2003

RJ Lee Group, Inc.  
Bay Area Lab

530 McCormick Street  
San Leandro, CA 94577

Page: 3 of 4

Authorized Signature

Scott Stotler, Geologist  
Tuesday, April 22, 2003

Date

Phone (510) 567-0480  
Fax (510) 567-0488



# Test Report - PBS Environmental - Bend

## Polarized Light Microscopy Analysis Results

### Project AOC304318


Sample Number / Sample Appearance	Client Sample Number	Chrysotile	Amosite	Crocidolite	Anthophyllite	Tremolite	Actinolite	Cellulose	Asbestos					Nonasbestos					NonFibrous Run Date
									Mineral	Fibrous	Synthetic	Other	Fibers	Fibers	Material	Analyst			
0037393CPL Grey linoleum	80054.000-019	-	-	-	-	-	-	20 %	-	-	-	3 %	2 %	-	75 %	4/22/03	SS	Homogeneous	
NFM: Qtz, Carb, Binder, Misc. Part.																			
0037394CPL Beige baseboard ; tan mastic	80054.000-020	-	-	-	-	-	-	<1 %	-	-	-	-	-	-	99+ %	4/22/03	SS	Non Homogeneous	
NFM: Qtz, Carb, Binder, Opaq, Misc. Part.																			
0037395CPL Brown linoleum ; tan mastic	80054.000-021	30 %	-	-	-	-	-	1 %	-	-	-	-	-	-	69 %	4/22/03	SS	Non Homogeneous	
NFM: Qtz, Carb, Binder, Opaq, Misc. Part.																			
Linoleum 30% Chrysotile ; Mastic 5% Chrysotile																			
Lower Content:																			

Layer Content: Linoleum 30% Chrysotile ; Mastic 5% Chrysotile

Samples received on: Friday, April 18, 2003

RJ Lee Group, Inc.  
Bay Area Lab

530 McCormick Street  
San Leandro, CA 94577  
Page: 4 of 4

Authorized Signature  Scott Stoller, Geologist  
Date Tuesday, April 22, 2003  
Phone (510) 567-0480  
Fax (510) 567-0488

Code	Material	Location	Lab
80054.000-0001	Lay-in Ceiling Tile	South Activity Room <b>Analysis:</b> 2' X 4' Random Pinhole Pattern No Asbestos Detected	R.J. Lee Group
80054.000-0002	Layered Flooring	South Activity Room <b>Analysis:</b> Vinyl Floor Tile/ Mastic (1) No Asbestos Detected Vinyl Sheet Flooring (4) 30% Chrysotile	R.J. Lee Group
80054.000-0003	Covebase/Mastic (1)	South Activity Room-kitchen <b>Analysis:</b> Gray 4" w/ beige mastic No Asbestos Detected	R.J. Lee Group
80054.000-0004	Sheet Floor Covering (1)	Dining Room <b>Analysis:</b> Gray Vinyl Sheet Flooring w/ tan mastic No Asbestos Detected	R.J. Lee Group
80054.000-0005	Sheet Floor Covering (2)	Dining Room- below SHT(1) and sub-flooring <b>Analysis:</b> Beige Vinyl Sheet Flooring 30% Chrysotile	R.J. Lee Group
80054.000-0006	Sheet Floor Covering (3)	North Janitorial Closet <b>Analysis:</b> Brown Vinyl Sheet Flooring 30 % Chrysotile Brown Mastic 5% Chrysotile	R.J. Lee Group
80054.000-0007	Covebase/Mastic (2)	N Restroom Area <b>Analysis:</b> Brown 4" w/ brown mastic No Asbestos Detected	R.J. Lee Group

Code	Material	Location	Lab
80054.000-0008	Vinyl Floor Tile (2)	Crawlspace below Recreation Room <b>Analysis:</b> Beige 9" Floor Tile 5% Chrysotile Black Mastic No Asbestos Detected	R.J. Lee Group
80054.000-0009	Material Debris	Crawlspace below Recreation Room <b>Analysis:</b> Gray fluffy debris at north end of crawl space 50% Amosite	R.J. Lee Group
80054.000-0010	Gypsum Wallboard/Joint Compd.	South Storage Room <b>Analysis:</b> No Asbestos Detected	R.J. Lee Group
80054.000-0011	Layered Flooring	NE Lounge <b>Analysis:</b> Vinyl Floor Tile/ Mastic (1) No Asbestos Detected Vinyl Sheet Flooring (3) 60% Chrysotile Vinyl Floor Tile (2) 3% Chrysotile Black Mastic No Asbestos Detected	R.J. Lee Group
80054.000-0012	Vinyl Floor Tile (1)	Main Office <b>Analysis:</b> Beige 12" Vinyl Floor Tile No Asbestos Detected Black Mastic No Asbestos Detected Leveling Compound No Asbestos Detected	R.J. Lee Group
80054.000-0013	Spray-on Ceiling	South End Column above drop ceiling <b>Analysis:</b> Gray fluffy material 90% Amosite	R.J. Lee Group
80054.000-0014	Material Debris	S. End perimeter wall behind storage closets <b>Analysis:</b> Gray fluffy material 90% Amosite	R.J. Lee Group

Code	Material	Location	Lab
80054.000-0015	Spray-on Ceiling	N. End near Restrooms- gap above air duct <b>Analysis:</b> Gray fluffy material 90% Amosite	R.J. Lee Group
80054.000-0016	Gypsum Wallboard/Joint Compd.	Coat Closet off Entry <b>Analysis:</b> No Asbestos Detected	R.J. Lee Group
80054.000-0017	Gypsum Wallboard/Joint Compd.	Dining Area <b>Analysis:</b> No Asbestos Detected	R.J. Lee Group
80054.000-0018	Lay-in Ceiling Tile	Dining Room <b>Analysis:</b> No Asbestos Detected	R.J. Lee Group
80054.000-0019	Sheet Floor Covering (1)	Kitchen <b>Analysis:</b> No Asbestos Detected	R.J. Lee Group
80054.000-0020	Covebase/Mastic (3)	Dining Room <b>Analysis:</b> No Asbestos Detected	R.J. Lee Group
80054.000-0021	Sheet Floor Covering (3)	Hallway off N. Entry <b>Analysis:</b> Vinyl Sheet Flooring 30% Chrysotile Brown Mastic 5% Chrysotile	R.J. Lee Group

THIS IS TO CERTIFY THAT

**JEFF HEEREN**

**HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE**

**for**

**ASBESTOS INSPECTOR REFRESHER**

In accordance with TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR

Course Date:

10/11/2002

Course Location:

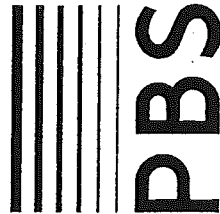
Portland, OR

Certificate:

IR-02-8438

Expiration Date:

10/11/2003



AHERA is the Asbestos Hazard Emergency Response Act enacting Title II of Toxic Substance Control Act (TSCA)

For verification of the authenticity of this

certificate contact: PBS Environmental

4412 SW Corbett Avenue, Portland, OR 97201

(503) 248-1939

A handwritten signature in cursive script, reading "David Stover".

David Stover, Director of Training

THIS IS TO CERTIFY THAT

**MATT HUTCHISON**

**HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE**

**for**

**ASBESTOS INSPECTOR REFRESHER - IN  
HOUSE**

In accordance with TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR

Course Date:

04/14/2003

Course Location:

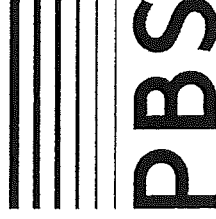
Portland, OR

Certificate:

IMR-03-7205

Expiration Date:

04/14/2004



AHERA is the Asbestos Hazard Emergency  
Response Act enacting Title II of Toxic  
Substance Control Act (TSCA)

For verification of the authenticity of this  
certificate contact: PBS Environmental  
4412 SW Corbett Avenue, Portland, OR 97239  
(503) 248-1939

A handwritten signature in dark ink, appearing to read "Dave Stover", is written over a horizontal line.

Dave Stover, Director of Training

March 21, 2019  
Project No. 11056 (3)

Mr. Andrew Spreadborough, Deputy Executive Director  
Neighborhood Impact  
20310 NE Empire Avenue  
Bend, Oregon 97701

**SUBJECT: Limited Asbestos-Containing Materials Survey  
Prineville Soroptimist Senior Center  
180 NE Belknap Street  
Prineville, Oregon 97754**

Dear Andrew:

This letter summarizes the results of a limited asbestos-containing materials (ACMs) survey for a rehabilitation project at the Prineville Soroptimist Senior Center located at 180 NE Belknap Street in Prineville, Oregon. The approximate 13,000-square-foot (sf) structure was constructed circa 1960. Wallace Group was commissioned by Steele Associates Architecture, LLC (Client), to perform this limited ACM survey as part of the part of the HUD program qualification, environmental due diligence process, and City of Prineville permit requirements.

The Oregon Department of Environmental Quality (DEQ) requires asbestos surveys of suspect building materials prior to demolition and/or renovation of public and private structures. The construction date of the subject building was reportedly before the 1988 U.S. ban on the use of ACMs in construction. Therefore, this building meets the above criteria, and a survey of potential ACMs is warranted. Building materials that contain greater than one percent (1%) asbestos are regulated by the U.S. Environmental Protection Agency (EPA) and DEQ. The DEQ enforces the U.S. EPA NESHAPS<sup>1</sup> rule with respect to releases of asbestos to the environment. The Oregon Occupational Safety and Health Division (Oregon OSHA) regulates ACMs with greater than 1% asbestos. The purpose of the AMCs survey was to also comply with DEQ and HUD program requirements.

---

<sup>1</sup> NESHAPS: National Emission Standards for Hazardous Air Pollutants

## FINDINGS

A limited visual survey for potential ACMs was conducted by an Asbestos Hazard Emergency Response Act (AHERA) accredited Wallace Group inspector (**Appendix B**) on March 14, 2019. Sampling was limited to areas indicated by the Client as scheduled for rehabilitation and/or renovation. Based on this limited visual survey, 14 suspect ACM samples were collected. See **Figure 1** for sample locations. The suspect materials included drywall, floor tile, ceiling tile, and vinyl cove-base. The suspect building materials were sprayed with a surfactant, sampled using tools decontaminated between each sample, placed into sealed plastic freezer bags, and labeled. Samples were shipped under chain-of-custody documentation to Crisp Analytical, LLC (CA), of Carrollton, Texas for polarized light microscopy (PLM) analysis. The CA analytical laboratory report and chain-of-custody documentation are included in **Appendix A**.

PLM analyses detected no asbestiform fibers in the 14 samples collected (**Table 1**). Based on the laboratory findings, ACM abatement is not warranted for any of the sampled materials. If inaccessible materials are exposed during any future demolition or remodeling, further sampling may be warranted to evaluate these materials.

## LIMITATIONS

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Wallace Group's profession practicing in the same locality, under similar conditions, and at the time the services were provided. Wallace Group's findings are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Wallace Group makes no other representation, guarantee, or warranty, expressed or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

This report may be used by the Client, its designated representatives, and only for the purposes stated for this specific engagement. Environmental issues can change with time. This report is based on the conditions observed at the time of site work and the data available at the time the report was prepared. Our findings remain valid until such time that site conditions change, and/or new environmental data are identified that could impact the project site. Should conditions change and/or new environmental data is identified, these findings should be updated.

Wallace Group assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing building conditions or hazardous



materials being encountered or present on the subject site. Nothing contained in this report should be construed or interpreted as requiring Wallace Group to assume the status of an owner, operator, or generator, or person who arranges for disposal, transport, storage or treatment of ACMs, or hazardous materials within the meaning of any governmental statute, regulation or order. The Client is solely responsible for directing notification of all governmental agencies, and the public at large, of the existence, release, treatment or disposal of any asbestos or hazardous materials at the site.

## CLOSING

We appreciate the opportunity to provide our professional environmental services. If questions arise regarding this report, or if we can be of additional service, please contact our Bend office at (541) 382-4707

Sincerely,

**Wallace Group, Inc.**



Stephen Woodward, G.I.T.  
AHERA Accredited Building Inspector



Shane Cochran, R.G.  
Project Geologist

Attachments:

Table 1: Summary of Analytical Results

Figure 1: Sample Location Map

Appendix A: Crisp Analytical Laboratory Report and Chain-of-Custody

Appendix B: Accredited Inspector Certificate

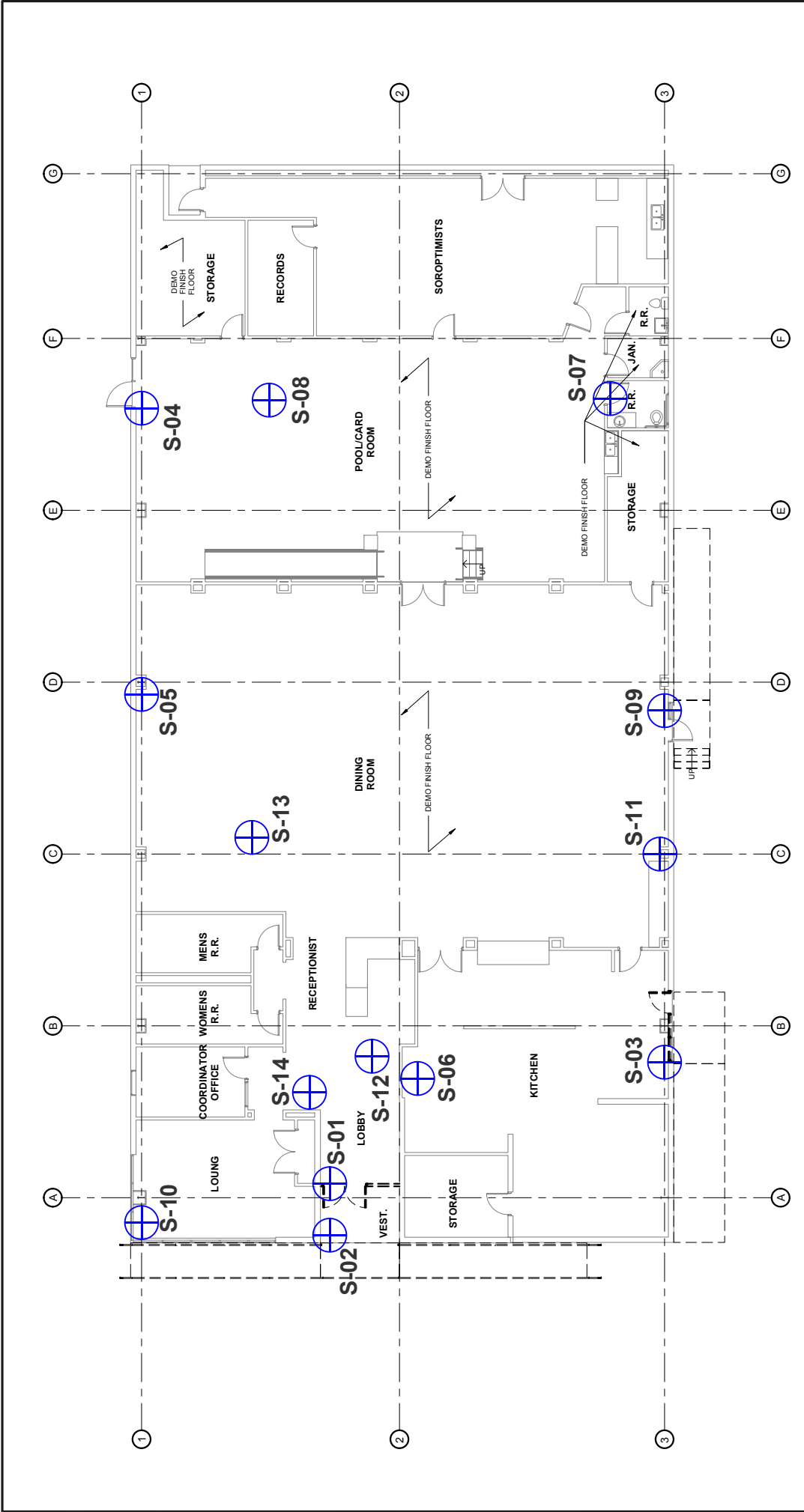
# TABLES

**Table 1**  
**Summary of Analytical Results**  
**Prineville Soroptimist Senior Center - 180 NE Belknap**  
**Prineville, Oregon**

Sample ID	Location	Material Sampled / Description	Result
S-1	Vestibule door surround	Drywall w/ texture, white, wall	ND
S-2	Vestibule door surround	Drywall w/ texture, white, wall	ND
S-3	Kitchen window frames	Drywall w/ texture, white, wall	ND
S-4	Card Room door surround	Drywall w/ texture, white, wall	ND
S-5	Dining Room	Vinyl tile, gray/green speckled, floor	ND
S-6	Kitchen	Vinyl tile, white speckled, floor	ND
S-7	Restroom-Card Room adjacent	Vinyl tile, white speckled, floor	ND
S-8	Card Room	Vinyl tile, gray/green speckled, floor	ND
S-9	Dining Room	Vinyl tile, gray/green speckled, floor	ND
S-10	Lounge window frames	Drywall w/ texture, white, wall	ND
S-11	Dining Room	Vinyl cove base, dark gray, floor	ND
S-12	Lobby	Vinyl cove base, dark gray, floor	ND
S-13	Dining Room	Ceiling tile, gray, ceiling	ND
S-14	Lobby	Ceiling tile, white, ceiling	ND

ND = no detection of asbestos fibers

# FIGURES



### LEGEND

⊕ S-06: SAMPLE LOCATION NEGATIVE FOR ACM's (APPROXIMATE)

GRAPHIC SCALE  
(IN FEET)  
1 inch = 24 ft

**ASBESTOS-CONTAINING MATERIALS SURVEY**  
**PRINEVILLE SOROPTIMIST SENIOR CENTER**  
**180 NORTH BELKNAP STREET**  
**PRINEVILLE, OREGON**

PROJECT No.: 11056 (3) **FIGURE**  
DRAWN: March 19, 2019  
DRAWN BY: DTJ  
CHECKED BY: SMW  
FILE NAME: 11056 (3)\_FIGURE\_1.DWG

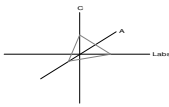
1

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# APPENDIX A

**CA Labs**  
Dedicated to  
Quality

**Crisp Analytical, L.L.C.**  
1929 Old Denton Road  
Carrollton, TX 75006  
Phone 972-242-2754  
Fax 972-242-2798



**CA Labs, L.L.C.**  
12232 Industriplex, Suite 32  
Baton Rouge, LA 70809  
Phone 225-751-5632  
Fax 225-751-5634

## **Materials Characterization - Bulk Asbestos Analysis**

### **Laboratory Analysis Report - Polarized Light**

#### **Wallace Group**

62915 NE 18th St., Ste 1  
Bend, OR 97701

Attn: Shane Cochran

Customer Project: 11056-3, Prineville Senior Center

Reference #: CAL19031660AF

Date: 3/18/2019

#### **Analysis and Method**

Summary of polarized light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved)). The sample is first viewed with the aid of a stereomicroscope. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are performed. Calibrated liquid refractive oils are used as liquid mounting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjunction with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

#### **Discussion**

Vermiculite containing samples may contain trace amounts of actinolite/tremolite. When not detected by PLM, these samples should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may contain a regulated asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be detectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Since allowable variation in quantification of samples close to 1% is high, <1% may be reported. Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos or "trace asbestos". **In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.**

#### **Qualifications**

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have completed college courses or hold a degree in a natural science (geology, biology, or environmental science). Recognition by a state professional board in one these disciplines is preferred, but not required. Extensive in-house training programs are used to augment the educational background of the analyst. The Laboratory Director and Quality Manager have received supplemental McCrone Research training for asbestos identification. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006

*Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235*  
**AIHA LAP, LLC Laboratory #102929**



## Overview of Project Sample Material Containing Asbestos

<b>Customer Project:</b>	11056-3, Prineville Senior Center		<b>CA Labs Project #:</b>	CAL19031660AF
Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affected Building Material Types

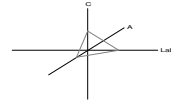
**No Asbestos Detected.**

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235  
**AIHA LAP, LLC Laboratory #102929**

### **Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):**

ca - carbonate	pe - perlite	fg - fiberglass	pa - palygorskite (clay)
gypsum - gypsum	qu - quartz	mw - mineral wool	
bi - binder		wo - wollastonite	
or - organic		ta - talc	
ma - matrix		sy - synthetic	
mi - mica		ce - cellulose	
ve - vermiculite		br - brucite	
ot - other		ka - kaolin (clay)	

This report relates to the items tested. This report is not to be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, AIHA LAP, LLC, or any other agency of the federal government. This report may not be reproduced except in full without written permission from CA Labs. These results are submitted pursuant to CA Labs' current terms and sale, condition of sale, including the company's standard warranty and limitations of liability provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, CA Labs will store the samples for a period of ninety (90) days before discarding. A shipping or handling fee may be assessed for the return of any samples.



## Polarized Light Asbestiform Materials Characterization

**Customer Info:** Attn: Shane Cochran

**Wallace Group**

62915 NE 18th St., Ste 1  
Bend, OR 97701

Phone # 541-382-4707

Fax # 541-383-8118

**Customer Project:**

11056-3, Prineville Senior  
Center

**Turnaround Time:**

24 Hours

**CA Labs Project #:**

CAL19031660AF

**Date:** 3/18/2019

**Samples Received:** 3/15/19 10:30am

**Date Of Sampling:** 3/14/2019

**Purchase Order #:** 11056-3

Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
----------	-------------	------------	---	-------------------------------	--	--------------------------------------	-------------------------------

S-1		1-1	<b>Drywall/ white surfaced white compound</b>	n	<b>None Detected</b>		100% qu,bi,ca
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S-2		2-1	<b>Drywall/ white surfaced white compound</b>	n	<b>None Detected</b>		100% qu,bi,ca
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		2-2	<b>white compound (beneath tape)</b>	y	<b>None Detected</b>		100% qu,ca
--	--	-----	--------------------------------------	---	----------------------	--	------------

S-3		3-1	<b>Drywall/ white surfaced white compound</b>	n	<b>None Detected</b>		100% mi,bi,ca
-----	--	-----	---	---	----------------------	--	---------------

		3-2	<b>white drywall with brown paper</b>	n	<b>None Detected</b>	20% ce	80% qu,gy
--	--	-----	---------------------------------------	---	----------------------	--------	-----------

S-4		4-1	<b>Drywall/ white surfaced white compound</b>	n	<b>None Detected</b>		100% qu,bi,ca
-----	--	-----	---	---	----------------------	--	---------------

		4-2	<b>white drywall with brown paper</b>	n	<b>None Detected</b>	20% ce	80% qu,gy
--	--	-----	---------------------------------------	---	----------------------	--------	-----------

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

### AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for

identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

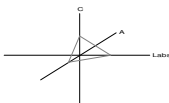
Julio Robles  
Analyst

Technical Manager  
Tanner Rasmussen

Senior Analyst  
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested



## Polarized Light Asbestiform Materials Characterization

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**Wallace Group**

62915 NE 18th St., Ste 1  
Bend, OR 97701

Phone # 541-382-4707

Fax # 541-383-8118

**Customer Project:**

11056-3, Prineville Senior  
Center

**Turnaround Time:**  
24 Hours

**CA Labs Project #:**

CAL19031660AF

**Date:** 3/18/2019

**Samples Received:** 3/15/19 10:30am

**Date Of Sampling:** 3/14/2019

**Purchase Order #:** 11056-3

Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
----------	-------------	------------	---	-------------------------------	--	--------------------------------------	-------------------------------

S-5	5-1	Vinyl Tile/ gray floor tile	y	None Detected	100% qu,ca
-----	-----	-----------------------------	---	---------------	------------

	5-2	tan mastic	y	None Detected	100% gy,bi
--	-----	------------	---	---------------	------------

S-6	6-1	Vinyl Tile/ tan self-adhesive floor tile	y	None Detected	100% qu,gy,ma
-----	-----	---	---	---------------	---------------

	6-2	tan mastic	y	None Detected	100% gy,bi
--	-----	------------	---	---------------	------------

S-7	7-1	Vinyl Tile/ tan self-adhesive floor tile	y	None Detected	100% qu,gy,ma
-----	-----	---	---	---------------	---------------

	7-2	tan mastic	y	None Detected	100% gy,bi
--	-----	------------	---	---------------	------------

S-8	8-1	Vinyl Tile/ gray floor tile	y	None Detected	100% qu,ca
-----	-----	-----------------------------	---	---------------	------------

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

### AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for

identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

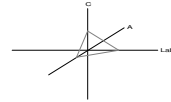
Julio Robles  
Analyst

Technical Manager  
Tanner Rasmussen

Senior Analyst  
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze

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7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested



## Polarized Light Asbestiform Materials Characterization

**Customer Info:** Attn: Shane Cochran

**Wallace Group**

62915 NE 18th St., Ste 1  
Bend, OR 97701

Phone # 541-382-4707

Fax # 541-383-8118

**Customer Project:**

11056-3, Prineville Senior  
Center

**Turnaround Time:**

24 Hours

**CA Labs Project #:**

CAL19031660AF

**Date:** 3/18/2019

**Samples Received:** 3/15/19 10:30am

**Date Of Sampling:** 3/14/2019

**Purchase Order #:** 11056-3

Sample #	Com ment	Layer #	Analysts Physical Description of Subsample	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
----------	-------------	------------	---	-------------------------------	--	--------------------------------------	-------------------------------

S-9	9-1	<b>Vinyl Tile/</b>	gray floor tile	y	<b>None Detected</b>		100% qu,ca
-----	-----	--------------------	-----------------	---	----------------------	--	------------

S-10	10-1	<b>Drywall/</b>	off-white surfaced white compound	n	<b>None Detected</b>		100% qu,bi,ca
------	------	-----------------	--------------------------------------	---	----------------------	--	---------------

S-11	11-1	<b>Cove Base/</b>	gray baseboard	y	<b>None Detected</b>		100% gy,ma
------	------	-------------------	----------------	---	----------------------	--	------------

S-12	12-1	<b>Cove Base/</b>	gray baseboard	y	<b>None Detected</b>		100% gy,ma
------	------	-------------------	----------------	---	----------------------	--	------------

S-13	13-1	<b>Ceiling Tile/</b>	white surfacing	y	<b>None Detected</b>		100% qu,bi,ca
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	13-2	<b>tan ceiling tile</b>		y	<b>None Detected</b>	40% ce 30% fg	30% qu,pe,ca
--	------	-------------------------	--	---	----------------------	------------------	--------------

S-14	14-1	<b>Ceiling Tile/</b>	white surfacing	y	<b>None Detected</b>		100% qu,bi,ca
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Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

### AIHA LAP, LLC Laboratory #102929

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or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

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Analyst

Technical Manager  
Tanner Rasmussen

Senior Analyst  
Julio Robles

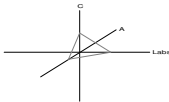
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Fax 972-242-2798



**CA Labs, L.L.C.**

12232 Industriplex, Suite 32  
Baton Rouge, LA 70809  
Phone 225-751-5632  
Fax 225-751-5634

**Polarized Light Asbestiform Materials Characterization**

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Bend, OR 97701

Phone # 541-382-4707

Fax # 541-383-8118

**Customer Project:**

11056-3, Prineville Senior  
Center

**Turnaround Time:**

24 Hours

**CA Labs Project #:**

CAL19031660AF

**Date:** 3/18/2019

**Samples Received:** 3/15/19 10:30am

**Date Of Sampling:** 3/14/2019

**Purchase Order #:** 11056-3

Sample #	Com ment	Layer #	Analysts Subsample	Physical Description of	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
14-2	tan ceiling tile				y	None Detected	40% ce 30% fg	30% qu,pe,ca

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

**AIHA LAP, LLC Laboratory #102929**

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

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gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Julio Robles  
Analyst

Technical Manager  
Tanner Rasmussen

Senior Analyst  
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

## Chain of Custody

Client Name:	Wallace Group	CA Labs job #	CAL 19031660
Client Address:	62915 NE 18 <sup>th</sup> St., STE 1 Bend, OR 97701	Billing Address: (if different)	
phone number:	541.382.4707	P.O. # :	11056-3
fax number:	541.383.8118	Project Name:	Prineville Senior Center ACM Survey – 180 N Belknap St.
Send Reports to:	Shane Cochran at scochran@wallacegroup-inc.com	Project Number:	11056-3
Contact: Shane Cochran		Report Results:	
		Via: EMAIL	<input checked="" type="checkbox"/> FAX <input type="checkbox"/> Verbal <input type="checkbox"/>
<b>Total # Samples Submitted:</b>	<b>14</b>	<b>Total # Samples to be Analyzed:</b>	<b>14</b>
		<b>Material Matrix:</b>	Air / <u>Bulk</u> / Water

*Please indicate appropriate turn around time.*

Asbestos: *please call ahead for availability of all rush and/or after hours samples.*

TEM	TA Time	PLM	TA Time	Optical / IAQ	TA Time
<i>Circle analysis and select TA time</i>		<i>Circle analysis and select TA time</i>		PCM: NIOSH 7400	Note TAT
AHERA		Improved	2 hour	Allergen Particle:	24 hour
EPA Level II	4 hour	Interim	4 hour	tape/bulk/swab	2 days
Drinking Water	8 hour		8 hour	Cyclex-d cassettes	3 days
Wipe	24 hour	AHERA	<u>24 hour</u>	Air-o-cell cassettes	5 days
Micro-vac	2 days		2 days	Anderson cultures	Specify
NIOSH 7402	3 days	Point Count -	3 days	Bulk/swab cultures	Mold or
Chatfield Bulk	5 days	(NESHAPS)	5 days	Bacteria cultures	bacteria

Lead: *Circle analysis and select TA time*

<b>Matrix:</b>	Paint Chips	Soil	Air	Wipes	Wastewater
<b>TA Time:</b>	8 hour	1 day	2 days	3 days	5 days

Sample Information:

Sample Number:	Sample Location:	Sample Date/Time:	Sample Description
S-1	Vestibule door surround	3-14-2019	Drywall w/ texture, white, wall
S-2	Vestibule door surround	3-14-2019	Drywall w/ texture, white, wall
S-3	Kitchen window frames	3-14-2019	Drywall w/ texture, white, wall
S-4	Card room door surround	3-14-2019	Drywall w/ texture, white, wall
S-5	Dining Room	3-14-2019	Vinyl tile, gray/green speckled, floor

Custody Information:

Samples relinquished:

*[Signature]* 3-14-19 1130am  
Signature / Date / Time

Samples received:

*[Signature]* 3/15/19 10:30am  
Signature / Date / Time

Samples relinquished:

\_\_\_\_\_  
Signature / Date / Time

Samples received:

\_\_\_\_\_  
Signature / Date / Time

S-6	Kitchen	3-14-2019	Vinyl tile, white speckled, floor
S-7	Restroom – Card Room adjacent	3-14-2019	Vinyl tile, white speckled, floor
S-8	Card Room	3-14-2019	Vinyl tile, gray/green speckled, floor
S-9	Dining Room	3-14-2019	Vinyl tile, gray/green speckled, floor
S-10	Lounge Window Frames	3-14-2019	Drywall w/ texture, white, wall
S-11	Dining Room	3-14-2019	Vinyl cove base, dark gray, floor
S-12	Lobby	3-14-2019	Vinyl cove base, dark gray, floor
S-13	Dining Room	3-14-2019	Ceiling tile, gray, ceiling
S-14	Lobby	3-14-2019	Ceiling tile, white, ceiling

Custody Information:


Samples relinquished:

 3-14-19 11:30 am  
Signature / Date / Time

Samples relinquished:

Signature / Date / Time

Samples received:

 3/15/19 10:30 am  
Signature / Date / Time

Samples received:

Signature / Date / Time

# APPENDIX B



THIS IS TO CERTIFY THAT

**STEPHEN WOODWARD**

**HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE**

**for**

**ASBESTOS INSPECTOR REFRESHER**

In accordance with TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR

Course Date: 09/20/2018

Course Location: Portland, OR

Certificate: IR-18-4576B



4-Hour Online Refresher Training

Expiration Date: 09/20/2019

For verification of the authenticity of this  
certificate contact:  
PBS Environmental  
4412 SW Corbett Avenue  
Portland, OR 97239  
(503) 248-1939

A handwritten signature in black ink, reading 'Greg M. Baker'.

Greg Baker, Instructor



# ATTACHMENT "A" – CONSTRUCTION CONTRACT

## "PRINEVILLE SENIOR CENTER REHABILITATION"

THIS CONTRACT is made and entered into this, or at the date every party has signed this contract, whichever is later) between the City of Prineville, municipal corporation of the State of Oregon, hereinafter referred to as the "Owner," or "City" and, hereinafter \_\_\_\_\_, referred to as the "Contractor."

**THE PARTIES AGREE AS FOLLOWS:**

### SECTION A: GENERAL PROVISIONS

#### A.1 DEFINITION OF TERMS

In the Contract Documents, the following terms shall be as defined below:

**CHANGE ORDER**, means a written order issued by the Owner's Authorized Representative to the Contractor requiring a change in the Work within the general scope of the Contract Documents, issued under the changes provisions of Section D.1 in administering the Contract, including Owner's written change directives as well as changes reflected in a writing executed by the parties to this Contract and, if applicable, establishing a Contract Price or Contract Time adjustment for the changed Work.

**CLAIM**, means a demand or assertion by Contractor seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract.

**CONTRACT**, means the written agreement between the Owner and the Contractor comprised of the Contract Documents that describe the Work to be done and the obligations between the parties.

**CONTRACT DOCUMENTS**, means the Solicitation Document #4005-18-19 in its entirety and addenda thereto, Contract containing Supplemental General Conditions (if any), the accepted Offer, Plans, Specifications, amendments and change orders.

**CONTRACT PERIOD**, as set forth in the Contract Documents, means the period beginning with the issuance of the Notice to Proceed and concluding upon Final Completion.

**CONTRACT PRICE** means the total of the awarded Offer amount, as increased or decreased by the price of approved alternates and change orders.

**CONTRACT TIME**, means any incremental period of time allowed under the Contract to complete any portion of the Work as reflected in the project schedule.

**CONTRACTOR** means the Person awarded the Contract for the Work contemplated.

**DAYS** are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

**DIRECT COSTS**, means, unless otherwise provided in the Contract Documents, the cost of materials, including sales tax, cost of delivery; cost of labor, including social security, old age and unemployment insurance, and fringe benefits required by agreement or custom; worker's compensation insurance; project specific insurance; bond premiums, rental cost of equipment, and machinery required for execution of the work; and the additional costs of field personnel directly attributable to the Work.

**FINAL COMPLETION** means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment, released.

**FORCE MAJEURE** means an act, event or occurrence caused by fire, riot, war, acts of God, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to this Contract who is asserting Force Majeure.

**NOTICE TO PROCEED** means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond if required, and certificates of insurance, have been fully executed and submitted to Owner in a suitable form.

**OFFER** means a bid or quote.

**OVERHEAD**, means those items which may be included in the Contractor's markup (general and administrative expense and profit) and that shall not be charged as Direct Cost of the Work, including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), and expenses of Contractor's offices at the job site (e.g. job trailer) including expenses of personnel staffing the job site office.

**OWNER**, means (City) the City of Prineville, Oregon.

**OWNER'S AUTHORIZED REPRESENTATIVE**, means the project manager and those individuals identified in writing by the Owner to act on behalf of the Owner for this project. Owner may elect, by written notice to Contractor, to delegate certain duties of the Owner's Authorized Representative to more than one party, including without limitation, to an Architect/Engineer. However, nothing in these General Provisions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

**PERSON** means an entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited liability company or partnership, or any other entity possessing the legal capacity to contract.

**PLANS**, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

**PRODUCT DATA** means illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other

information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

**PUNCH LIST** means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

**PURCHASE ORDER** means the purchase order issued by the Owner in which the Contract Documents are incorporated by reference.

**RECORD DOCUMENT** means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer to Owner, operational and maintenance manuals, shop drawings, Change Orders, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these General Provisions, recording all Services performed.

**SAMPLES**, means physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

**SHOP DRAWINGS** means drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

**SOLICITATION DOCUMENT** means an invitation to bid or request for proposal or request for quotes.

**SPECIFICATION** means any description of the physical or functional characteristics of the Work, or of the nature of a supply, service or construction item. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

**SUBCONTRACTOR**, means a Person having a direct contract with the Contractor, or another Subcontractor, to perform one or more items of the Work.

**SUBSTANTIAL COMPLETION** means the date when the Owner accepts in writing the construction, alteration or repair of the improvement to real property or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems.

**SUBSTITUTIONS**, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Approval of any substitute item shall be solely determined by the Owner's Authorized Representative. The decision of the Owner's Authorized Representative is final.

**SUPPLEMENTAL GENERAL CONDITIONS** means those conditions that remove from, add to, or modify these COP General Provisions. Supplemental General Conditions may be included in the Solicitation Document or may be a separate attachment to the Contract.

**WORK**, means the furnishing of all materials, equipment, labor, transportation, services and incidentals necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents.

## **A.2 SCOPE OF WORK**

The Work contemplated under this Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all construction work in connection with the "the **"PRINEVILLE SENIOR CENTER REHABILITATION"** #4017-17-18 project as described in the Invitation to Bid and contract documents. The Contractor shall perform all Work necessary so that the project can be legally occupied and fully used for the intended use as set forth in the Contract Documents.

In consideration of the covenants, agreement and payments to be performed and made by the Owner, the Contractor hereby covenants and agrees for itself, its heirs, executors, successors and assigns to furnish all labor, tools, materials, equipment and supplies required for, and to construct and substantially complete in a good, workmanlike the work shown upon a Bid Proposal and described in said Bid Proposal's accompanying bid documents titled: the **"PRINEVILLE SENIOR CENTER REHABILITATION"**# 4017-17-18 hereinafter referred to as the "Project."

All Work to be done under the Contract shall be completed by **October 14, 2019**, or as extended by change order and shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of overtime. Such accelerated Work shall be subject to the change order process. The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete the Work or any part of it after the completion date contained in the Contract documents or extended by change order.

Contractor shall recycle, where possible, with documentation of recycling.

## **A.3 INTERPRETATION OF CONTRACT DOCUMENTS**

**A.3.1** In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner or Owner's Authorized Representative's interpretation in writing.

**A.3.2** If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their meaning, the Contractor shall at once notify the Owner or Owner's Authorized Representative. Matters concerning performance under and interpretation of requirements of, the Contract Documents will be decided by the Owner's Authorized Representative. Responses to Contractor's requests for interpretation of Contract Documents will be made in writing by Owner's Authorized Representative within any time limits agreed upon or otherwise with reasonable promptness. Interpretations and decisions of the Owner's Authorized Representative will be consistent with the intent of and reasonably inferable from the Contract Documents. Contractor shall not proceed without direction in writing from the Owner's Authorized Representative.

**A.3.3** References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the project is occurring on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

#### **A.4 EXAMINATION OF PLANS, SPECIFICATIONS AND SITE**

**A.4.1** It is understood that the Contractor, before submitting an Offer, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.

**A.4.2** Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements. Owner may require samples and may test products and workmanship for compliance.

**A.4.3** Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner's Authorized Representative, including without limitation, any nonconformity with applicable laws, statutes, ordinances, building codes, rules and regulations.

**A.4.4** If the Contractor believes that additional cost or time is involved because of clarifications or instructions issued by the Owner's Authorized Representative in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner's Authorized Representative, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Contractor does not concur with the decision of the Owner's Authorized Representative regarding time and cost impacts of the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.2, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

**A.4.5** The Contractor shall visit each site, review available, current As-Built's, and examine the prospective Work prior to preparing their proposal.

#### **A.5 INDEPENDENT CONTRACTOR STATUS**

The Work to be performed under this Contract is that of an independent contractor. Contractor represents and warrants that it is not an officer, employee or agent of the Owner as those terms are used in ORS 30.265.

#### **A.6 RETIREMENT SYSTEM STATUS AND TAXES**

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under this Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

#### **A.7 GOVERNMENT EMPLOYMENT STATUS**

**A.7.1** If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.

**A.7.2** Contractor represents and warrants that Contractor is not an employee of the City of Prineville for purposes of performing Work

## **SECTION B: ADMINISTRATION OF THE CONTRACT**

### **B.1 OWNER'S ADMINISTRATION OF THE CONTRACT**

The Owner's Authorized Representative will visit the site at appropriate intervals to endeavor to guard the Owner against defects and deficiencies in the Work. The Owner's Authorized Representative will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work.

### **B.2 CONTRACTOR'S MEANS AND METHODS; MITIGATION OF IMPACTS**

**B.2.1** The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.

**B.2.2** The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the project, including those caused by authorized changes, which may affect cost, schedule, or quality.

**B.2.3** The Contractor is responsible for the actions of all its personnel, laborers, suppliers, and Subcontractors on the project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work.

### **B.3 MATERIALS AND WORKMANSHIP**

All Work shall be performed in a professional manner and, unless the means or methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.

### **B.4 PERMITS**

The Contractor will pay for all permits necessary for the project. Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities. The Contractor shall pay all royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent or other proprietary rights and save harmless and blameless from loss, on account thereof, the City of Prineville, and its officers, employees and agents.

### **B.5 COMPLIANCE WITH GOVERNMENT REGULATIONS**

**B.5.1** Contractor shall comply with all federal, state and local laws, codes, regulations and ordinances applicable to the Work. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Damages or costs resulting from noncompliance shall be the responsibility of Contractor. Contractor shall comply with all federal, state and local laws, regulations, executive orders and ordinances applicable to the Contract. The parties shall comply with any state or federal law or regulation specific to the funding source that supports this Contract. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with:

1. Title VI and VII of Civil Rights Act of 1964, as amended; and
2. Section 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Health Insurance Portability and Accountability Act of 1996; (iv) the Americans with Disabilities Act of 1990, as amended; (v) ORS Chapter 659A; as amended; (vi) all regulations and administrative rules established pursuant to the foregoing laws; and (vii) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations.

**B.5.2** Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations; and

1. Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, in the awarding of subcontracts.
2. Contractor shall maintain, in current and valid form, all licenses and certificates required by law, regulation, or this Contract when performing the Work.



**B.5.3** Unless contrary to federal law, Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work as described in ORS 701.005 under this Contract unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time they submit their bids to the Contractor.

**B.5.4** Unless contrary to federal law, Contractor shall certify that each landscape contractor, as defined in ORS 671.520(2), performing Work under this Contract holds a valid landscape contractor's license issued pursuant to ORS 671.560.

**B.5.5** The following notice is applicable to Contractors who perform excavation Work:

**ATTENTION:**

Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (503)232-1987.

**B.5.6** Contractor shall comply will applicable requirements of federal and state requirements regarding community development block grants, which are attached as Attachment H, and incorporated herein.

**B.5.7** Contractor shall comply with the City of Prineville Inadvertent Discovery Plan attached as Attachment J, and incorporated herein.

**B.5.8** Failure to comply with any or all of the requirements B.5.1 through B.5.7 shall be a breach of Contract and constitute grounds for Contract termination. Damages or costs resulting from noncompliance shall be the responsibility of Contractor.

**B.5.9 INCORPORATION OF GRANT.** This agreement shall be subject to all provisions, requirements, and conditions of Grant Number C17006, attached as Attachment "L" and incorporated herein. In the event that any term or provision of this Agreement conflicts with Grant Contract Number 17006, the terms of the Grant Contract shall control.

## **B.6 SUPERINTENDENCE**

Contractor shall keep on the site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the site. Directions given to the superintendent by the Owner's Authorized Representative shall be confirmed in writing to the Contractor.

## **B.7 INSPECTION**

**B.7.1** The Owner's Authorized Representative at its discretion will make Inspection of the Work. The Owner's Authorized Representative will have authority to reject Work that does not conform to the Contract Documents. Any Work found to be not in conformance with the Contract Documents, in the discretion of the Owner's Authorized Representative, shall be removed and replaced at the Contractor's expense.

**B.7.2** Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall arrange for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner's Authorized Representative timely notice of when and where tests and inspections are to be made so that the Owner's Authorized Representative may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner's Authorized Representative.

**B.7.3** If directed to do so any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without sufficient notice to the Owner's Authorized Representative, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the Owner's Authorized Representative, the uncovering and restoration will be paid for as a change order.

**B.7.4** If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's Authorized Representative's services and expenses, shall be at the Contractor's expense.

## **B.8 SEVERABILITY**

If any provision of this Contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

## **B.9 ACCESS TO RECORDS**

**B.9.1** Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, change orders and addenda, in good order and marked currently to record field changes and selections made during construction, and one record copy of Shop Drawings, Product Data, Samples and similar submittals, and shall at all times give the Owner's Authorized Representative access thereto.

**B.9.2** The Owner and its duly authorized representatives shall have access, for a period not less than three (3) years, to books, documents, papers and records of Contractor which are pertinent to the Contract costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Contract is involved in litigation, Contractor shall retain all pertinent records until all litigation is resolved. The Owner or its agents will continue to be provided full access to the records during litigation.

## **B.10 WAIVER**

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

## **B.11 SUBCONTRACTS AND ASSIGNMENT**

**B.11.1** Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these General Provisions, and to assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.

**B.11.2** Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under this Contract, in whole or in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of this Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

## **B.12 SUCCESSORS IN INTEREST**

The provisions of this Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

## **B.13 OWNER'S RIGHT TO DO WORK**

Owner reserves the right to perform other or additional work at or near the project site with other forces than those of the Contractor. If such work takes place within or next to the project site, Contractor will coordinate work with the other contractors or forces, cooperate with all other contractors or forces, carry out the Work in a way that will minimize interference and delay for all forces involved, place and dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner's Authorized Representative will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner's Authorized Representative will establish work priority (including the Work) which generally will be in the sequence that the contracts were awarded.

## **B.14 OTHER CONTRACTS**

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of this Contract. The Contractor of this Contract will fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in section B.13.

## **B.15 GOVERNING LAW**

This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflict of laws.

## **B.16 LITIGATION**

Any Claim between Owner and Contractor that arises from or relates to this Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Crook County Oregon Circuit Court;



provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the City of Prineville of any form of defense or immunity, whether sovereign immunity, governmental immunity or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR BY EXECUTION OF THIS CONTRACT HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION.

## **B.17 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

**B.17.1** The Contractor shall review for compliance with the Contract Documents, and approve and submit to the Owner's Authorized Representative, Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Owner's Authorized Representative without action.

**B.17.2** By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

**B.17.3** The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Owner's Authorized Representative.

**B.17.4** The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Owner's Authorized Representative's review or approval of Shop Drawings, Product Data, Samples or similar submittals. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Owner's Authorized Representative's review or approval thereof.

## **B.18 SUBSTITUTIONS**

The Contractor may make Substitutions only with the consent of the Owner, after evaluation by the Owner's Authorized Representative and only in accordance with a Change Order. Substitutions shall be subject to the requirements of the bid documents. By making requests for Substitutions, the Contractor represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under this Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

## **B.19 USE OF PLANS AND SPECIFICATIONS**

Contractor shall furnish every Subcontractor a complete set of construction Plans, Specifications, and current project schedule to insure that these documents are on the project site and in use when Subcontractor is performing its portion of the work, Plans, Specifications and related Contract Documents furnished to Contractor by Owner shall be used solely for the performance of the Work under this Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of this Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and other reserved rights, in addition to copyrights, are retained by Owner.

## **B.20 FUNDS AVAILABLE AND AUTHORIZED**

Owner reasonably believes at the time of entering into this Contract that sufficient funds are available and authorized for expenditure to finance the cost of this Contract within the Owner's appropriation or limitation. Contractor understands and agrees that, to the extent that sufficient funds are not available and authorized for expenditure to finance the cost of this Contract, Owner's payment of amounts under this Contract attributable to services performed after the last day of the current fiscal year is contingent on Owner receiving from the Prineville City Council appropriations, limitations or other expenditure authority sufficient to allow Owner, in the exercise of its reasonable administrative discretion, to continue to make payments under this Contract.

## **B.21 MODIFICATION OF CONTRACT**

Any modification of the provisions of this Contract shall not be enforceable unless first reduced to writing and signed by both parties.

A modification is a written document, contemporaneously executed by City and Contractor, which increases or decreases the cost to City over the agreed sum or changes or modifies the Project. Any such modification shall be effective only in the specific instance and for the specific purpose identified in the modification.

## **B.22 NO THIRD PARTY BENEFICIARIES**

Owner and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

## **B.23 NOTICES**

All notices required to be given by one party to the other and all requests for payment shall be deemed given when mailed to the parties at the following address:

FOR CONTRACTOR:

FOR OWNER:

City of Prineville  
387 NE Third Street  
Prineville, OR 97754

## **B.24 DISCLOSURE OF SOCIAL SECURITY NUMBER**

Contractor must provide Contractor's Social Security Number (SSN) unless Contractor provides an Employer Identification Number (EIN) or other valid form of Taxpayer Identification Number (TIN). Contractor's TIN will be reported to the Internal Revenue Service (IRS) under the name and TIN submitted. (See IRS 1099 for more information.) Information not matching IRS records may subject Contractor to backup withholding.

# **SECTION C: WAGES AND LABOR**

## **C.1 MINIMUM WAGE RATES ON PUBLIC WORKS**

Work under this contract will be funded in part with federal grant funds from Oregon Community Development Block Grant program. All work under this project is subject to federal Davis Bacon prevailing wage requirements as well as Oregon (BOLI) prevailing wage requirements. Contractors shall pay each worker employed in the performance of this contract not less than the higher wage rate for the type of work being performed as set forth in the "Prevailing Wage Rates for Public Works Contracts in Oregon" or the applicable federal Davis Bacon Wage Decision. If the contractor fails to pay for labor and services, the City of Prineville can pay for them and withhold these amounts from payment to the contractor. The contractor must pay daily, weekly, weekend and holiday overtime as required. The City of Prineville will actively monitor work under this contract for compliance with state and federal prevailing wage requirements.

The state prevailing wage rates to be paid under the state prevailing wage rate law are set out in the BOLI Publication entitled "Prevailing Wage Rates for Public Works Contracts in Oregon" (Region10) dated **January 01, 2019** and all applicable amendments and corrections to amendments subsequently issued from that date. The state prevailing wage rate publication is available at <https://www.oregon.gov/boli/WHD/PWR/Pages/January-1%202019-PWR-Rates-.aspx> BOLI staff is available to assist in determining the applicable wage rates by calling (971) 673-0839.

Federal prevailing wage provisions and rates to be paid are included in this document as Attachments "H" and "I".

## **C.2 PAYROLL CERTIFICATION, ADDITIONAL RETAINAGE AND FEE REQUIREMENTS**

**C.2.1** In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner's Authorized Representative, on the form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed on the project and further certifying that no worker employed on the project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract. The certified statement shall be verified by the oath of the Contractor or the Contractor's surety or Subcontractor or the Subcontractor's surety that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement and that to the Contractor's or Subcontractor's best knowledge the certified statement is true. The certified statements shall set out accurately and completely the Contractor's or

Subcontractor's payroll records including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, and the gross wages the worker earned upon the project during each week identified in the certified statement. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the project shall be submitted once a month, by the fifth business day of the following month.

**C.2.2** Pursuant to ORS 279C.845 (7), the Owner shall retain 25 percent of any amount earned by the Contractor on this public works project until the Contractor has filed the certified statements required by section C.2.1 (FHWA Form 1273). The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements.

**C.2.3** Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this public works project until the first-tier Subcontractor has filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.

**C.2.4** The City will withhold from progress payments as follows:

The City will retain 5 percent of the total earned for the work completed. The Contractor shall inform the City if the Contractor wishes to exercise an option under ORS 279C.560.

**C.2.4.1** Retainage shall be withheld and released in accordance with ORS 279C.550 to 279C.580:

**C.2.4.2** The retainage held by CITY shall be included in and paid to the Contractor as part of the final payment of the Contract Price.

The Contractor and Subcontractors shall preserve the certified statements for a period of three (3) years from the date of completion of the Contract.

### **C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS**

**C.3.1** Pursuant to ORS 279C.505 and as a condition to Owner's performance hereunder, the Contractor shall:

1. Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in this Contract.
2. Pay all contributions or amounts due the State Industrial Accident Fund from such Contractor or Subcontractor incurred in the performance of the Contract.
3. Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.
4. Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
5. Demonstrate that an employee drug-testing program is in place as follows:

(a) Contractor represents and warrants that Contractor has in place at the time of the execution of this Contract, and shall maintain during the term of this Contract, a Qualifying Employee Drug Testing Program for its employees that includes, at a minimum, the following:

(i) A written employee drug testing policy,

(ii) Required drug testing for all new Subject Employees or, alternatively, required testing of all Subject Employees every 12 months on a random selection basis, and

(iii) Required testing of a Subject Employee when the Contractor has reasonable cause to believe the Subject Employee is under the influence of drugs.

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

(b) Contractor shall require each Subcontractor providing labor for the project to:

(i) Demonstrate to the Contractor that it has a Qualifying Employee Drug Testing Program for the Subcontractor's Subject Employees, and represent and warrant to the Contractor that the Qualifying Employee Drug Testing Program is in place at the time of subcontract execution and will continue in full force and effect for the duration of the subcontract, or

(ii) Require that the Subcontractor's Subject Employees participate in the Contractor's Qualifying Employee Drug Testing Program for the duration of the subcontract.

**C.3.2** Pursuant to ORS 279C.515, and as a condition to Owner's performance hereunder, Contractor agrees:

1. If Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor or a Subcontractor by any person in connection with the project as such claim becomes due, the proper officer(s) representing the Owner may pay the claim and charge the amount of the payment against funds due or to become due Contractor under this Contract. Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.
2. If the Contractor or a first-tier Subcontractor fails, neglects or refuses to make payment to a person furnishing labor or materials in connection with the public contract for a public improvement within thirty (30) Days after receipt of payment from Owner or a contractor, the contractor or first-tier Subcontractor shall owe the person the amount due plus interest charges commencing at the end of the 10-Day period that payment is due under ORS 279C.580(3) and ending upon final payment, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The rate of interest charged to the Contractor or first-tier Subcontractor on the amount due shall equal three times the discount rate on 90-Day commercial paper in effect at the Federal Reserve Bank in the Federal Reserve district that includes Oregon on the date that is thirty (30) Days after the date when payment was received from Owner or from the Contractor, but the rate of interest shall not exceed thirty (30) percent. The amount of interest may not be waived.
3. If the Contractor or a Subcontractor fails, neglects or refuses to make payment to a person furnishing labor or materials in connection with the Contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580. Every contract related to this Contract shall contain a similar clause.

**C.3.3** Pursuant to ORS 279C.580, Contractor shall include in each subcontract for property or services entered into by the Contractor and a first-tier Subcontractor, including a material supplier, for the purpose of performing a construction contract:

1. A payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) Days out of such amounts as are paid to the Contractor by Owner under the Contract;
2. An interest penalty clause that obligates the Contractor if payment is not made within thirty (30) Days after receipt of payment from Owner, to pay to the first-tier Subcontractor an interest penalty on amounts due in the case of each payment not made in accordance with the payment clause included in the subcontract pursuant to paragraph (a) of this subsection. Contractor or first-tier Subcontractor shall not be obligated to pay an interest penalty if the only reason that the Contractor or first-tier Subcontractor did not make payment when payment was due is that the Contractor or first-tier Subcontractor did not receive payment from Owner or Contractor when payment was due. The interest penalty shall be for the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and shall be computed at the rate specified in ORS 279C.515(2).
3. A clause which requires each of Contractor's Subcontractor's to include, in each of their contracts with lower-tier Subcontractors or suppliers, provisions to the effect that the first-tier Subcontractor shall pay its lower-tier Subcontractors and suppliers in accordance with the provisions of subsections (a) and (b), above and requiring each of their Subcontractors and suppliers to include such clauses in their subcontracts and supply contracts.

**C.3.4** All employers, including Contractor, that employ subject workers who work under this contract in the State of Oregon shall

comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.

#### **C.4 PAYMENT FOR MEDICAL CARE**

Pursuant to ORS 279C.530, and as a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, all sums of which the Contractor agrees to pay for such services and all moneys and sums which the Contractor has collected or deducted from the wages of personnel pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

#### **C.5 HOURS OF LABOR**

As a condition to Owner's performance hereunder, Contractor shall comply with ORS 279C.520, as amended from time to time and incorporated herein by this reference:

Pursuant to ORS 279C.520 and as a condition to Owner's performance hereunder, no person shall be employed to perform Work under this Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

1. For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or
2. For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and
3. For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This section C.5 will not apply to Contractor's Work under this Contract if Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under this Contract.

#### **C.6 SALVAGING AND RECYCLING.**

Pursuant to ORS 279C.510 (1), and as a condition of City's performance hereunder, if this Contract is a contract for demolition, Contractor shall salvage or recycle construction and demolition debris, if feasible and cost-effective.

Pursuant to ORS 279C.510 (2), and as a condition of City's performance hereunder, if this Contract is a contract for lawn and landscape maintenance, Contractor shall compost or mulch yard waste at an appropriate site, if feasible and cost-effective.

### **SECTION D: CHANGES IN THE WORK**

#### **D.1 CHANGES IN WORK**

**D.1.1** The terms of this Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, without prior written approval of the Owner's Authorized Representative, and then only in a manner consistent with the Change Order provisions of this Section D.1 and after any necessary approvals required by public contracting laws have been obtained. Otherwise, a formal contract amendment is required, which shall not be effective until its execution by the parties to this Contract and all approvals required by public contracting laws have been obtained.

The City of Prineville reserves the right to increase or decrease quantities without limit or to omit portions of the work without invalidating said proposal or re-negotiating the unit bid price.

**D.1.2** It is mutually agreed that changes in Plans, quantities, or details of construction are inherent in the nature of construction and may be necessary or desirable during the course of construction. Within the general scope of this Contract, the Owner's Authorized Representative may at any time, without notice to the sureties and without impairing the Contract, require changes consistent with this Section D.1. All Change Order Work shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:

1. Modification of specifications and design.

2. Increases or decreases in quantities.
3. Increases or decreases to the amount of Work.
4. Addition or elimination of any Work item.
5. Change in the duration of the project.
6. Acceleration or delay in performance of Work.
7. Deductive Changes.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self-perform such Work, for which the provisions of B.13 (Owner's Right to Do Work) shall then apply.

Adjustments in compensation shall be made under the provisions of D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

**D.1.3** The Owner and Contractor agree that change order Work shall be administered and compensated according to the following;

1. Change order Work shall be performed on a cost reimbursement basis for Direct Costs. Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. In addition, the following markups shall be added to the Contractor's or Subcontractor's Direct Costs as full compensation for profit, Overhead and other indirect costs for Work directly performed with the Contractor's or Subcontractor's own forces:
  - Labor – 15%
  - Equipment – 10%
  - Materials – 10%
2. When change order Work under D.1.3(1) is invoiced by an authorized Subcontractor at any level, each ascending tier Subcontractor or Contractor will be allowed a supplemental mark-up on each piece of subcontract Work covered by such change order as follows:
  - \$0.00 - \$5,000.00 - 10%;
  - Residual balance over \$5,000.00 - 5%

Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other forces furnished by the Contractor, including Subcontractors, for change order Work. Owner may establish a maximum cost for change order Work under this Section D.1.3 (1), which shall not be exceeded for reimbursement without additional written authorization from Owner. Contractor shall not be required to complete such change order Work without additional authorization.

**D.1.4** If any Change Order Work under Section D.1.3 causes an increase or decrease in the Contractor's cost of, or the Contract Time required for the performance of, any other part of the Work under this Contract, the Contractor must submit a written request to the Owner's Authorized Representative, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of the Change Order by Contractor.

The thirty (30) day time limit applies to claims of Subcontractors, suppliers, or manufacturers who may be affected by the Change Order and who request additional compensation or an extension of Contract Time to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) day time limit, and including their requests with Contractor's requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the compensation and additional Contract Time requested. The Contractor will analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor's analysis and evaluation of those requests with Contractor's requests for additional compensation or Contract Time that Contractor submits to the Owner's Authorized Representative. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner's Authorized Representative within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner's Authorized Representative and the Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to this Contract. The consideration of such requests and claims under this section does not give any person, not a party to the Contract the right to bring a claim against the City, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner's Authorized Representative denies the Contractor's request for additional compensation or an extension of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

**D.1.5** No request or Claim by the Contractor for additional costs or an extension of Contract Time shall be allowed if made after receipt of final payment application under this Contract.

Contractor agrees to submit its final payment application within ninety (90) days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay final payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to this Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its final payment application within ninety (90) days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be waived.

**D.1.6** It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor is notified that numerous changes are anticipated and that there will be no compensation made to the Contractor directly related to the number of changes. Each change will be evaluated for extension of Contract time and increase or decrease in compensation based on its own merit.

**D.1.7** If changes in the Work increase the total Contract Price, the Contractor shall notify its Surety of the increase and shall provide the City with a copy of any resulting modification to bond documents.

## **D.2 DELAYS**

**D.2.1** Delays in construction include "Avoidable Delays," which are defined in Section D.2.1.1, and "Unavoidable Delays," which are defined in Section D.2.1.2. The effect of Avoidable Delays is described in Section D.2.2 and the effect of Unavoidable Delays is described in Section D.2.3.

1. Avoidable Delays include any delays other than Unavoidable Delays, and include delays that otherwise would be considered Unavoidable Delays but that:
  - (a) Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
  - (b) Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of other parts of the Work nor the completion of the whole Work within the Contract Time.
  - (c) Do not impact activities on the accepted critical path schedule.
  - (d) Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily prevent the completion of the whole Work within the Contract Time.
2. Unavoidable Delays include delays other than Avoidable Delays that are:
  - (a) Caused by any actions of the Owner, Owner's Authorized Representative, or any other employee or agent of the Owner, or by separate contractor employed by the Owner.
  - (b) Caused by any site conditions which differ materially from what was represented in the Contract Documents or from conditions that would normally be expected to exist and be inherent to the construction activities defined in the Contract Documents. The Contractor shall notify the Owner's Authorized Representative immediately of differing site conditions before the area has been disturbed. The Owner's Authorized Representative will investigate the area and make a determination as to whether or not the conditions differ materially from either the conditions stated in the Contract Documents or those which could reasonably be expected in execution of this particular Contract. If Contractor and the Owner's Authorized Representative agree that a differing site condition exists, any additional compensation or additional Contract Time will be determined based on the process set forth in Section D.1.5 for Change Order Work. If the Owner's Authorized Representative disagrees that a differing site condition exists and denies Contractor's request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.
  - (c) Caused by Force Majeure acts, events or occurrences that could not have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.

(d) Caused by adverse weather conditions. Any adverse weather conditions must be substantiated by documentary evidence that weather conditions were abnormal for the specific time period claimed, could not have been anticipated by the Contractor, and adversely impacted the project in a manner that could not be avoided by rescheduling the Work or by implementing measures to protect against the weather so that the Work could proceed. A rain, windstorm, high water, or other natural phenomenon for the specific locality of the Work, which might reasonably have been anticipated from the previous 10-year historical records of the general locality of the Work, shall not be construed as abnormal. The parties agree that rainfall greater than the following levels cannot be reasonably anticipated:

(i) Daily rainfall equal to, or greater than, 0.50 inch during a month when the monthly rainfall exceeds the normal monthly average by twenty-five percent (25 %) or more.

(ii) Daily rainfall equal to, or greater than, 0.75 inch at any time.

The Office of the Environmental Data Service of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce nearest the project site shall be considered the official agency of record for weather information.

**D.2.2** Except as otherwise provided in ORS 279C.315, Contractor shall not be entitled to additional compensation or additional Contract Time for Avoidable Delays.

**D.2.3** In the event of Unavoidable Delays, based on principles of equitable adjustment, Contractor may be entitled to the following:

1. Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
2. Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.3 for Unavoidable Delays, other than requests for additional compensation or additional Contract Time for differing site conditions for which a review process is established under Section D.2.1.2 (b), Contractor shall submit a written notification of the delay to the Owner's Authorized Representative within two (2) Days of the occurrence of the cause of the delay. This written notification shall state the cause of the potential delay, the project components impacted by the delay, and the anticipated additional Contract Time or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor shall submit to the Owner's Authorized Representative, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay.

If the Owner's Authorized Representative denies Contractor's request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

If Contractor does not timely submit the notices required under this Section D.2., then unless otherwise prohibited by law, Contractor's Claim shall be barred.

### **D.3 CLAIMS REVIEW PROCESS**

**D.3.1** All Contractor Claims shall be referred to the Owner's Authorized Representative for review. Contractor's Claims, including Claims for additional compensation or additional Contract Time, shall be submitted in writing by Contractor to the Owner's Authorized Representative within five (5) Days after Contractor's initial request has been denied. Within thirty (30) Days after the initial Claim, Contractor shall submit to the Owner's Authorized Representative, a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Unless the Claim is made in accordance with these time requirements, it shall be waived.

**D.3.2** The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time extension requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner's Authorized Representative. The Owner's Authorized Representative and the Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to this Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.

**D.3.3** The Owner's Authorized Representative will review all Claims and take one or more of the following preliminary actions



within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor and Owner in writing of the time required for adequate review and response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) based on principles of equitable adjustment, recommend approval of all or part of the Claim; or (5) propose an alternate resolution.

**D.3.4** The Owner's Authorized Representative's decision shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.

**D.3.5** The decision of the Owner shall be final and binding unless the Contractor delivers to the Owner its request for mediation, which shall be a non-binding process, within fifteen (15) Days of the date of the Owner's decision. The mediation process will be considered to have commenced as of the date the Contractor delivers the request. Both parties acknowledge and agree that participation in mediation is a prerequisite to commencement of litigation of any disputes relating to the Contract. Both parties further agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the commencement of the mediation through the mediation process set forth herein.

In the event that a lawsuit must be filed within this sixty (60) Day period in order to preserve a cause of action, the parties agree that notwithstanding the filing, they shall proceed diligently with the mediation to its conclusion prior to actively prosecuting the lawsuit, and shall seek from the Court in which the lawsuit is pending such stays or extensions, including the filing of an answer, as may be necessary to facilitate the mediation process. Further, in the event settlements are reached on any issues through mediation, the parties agree to promptly submit the appropriate motions and orders documenting the settlement to the Court for its signature and filing.

**D.3.6** Should the parties arrive at an impasse regarding any Claims or disputed Claims, it is agreed that the parties shall participate in mediation as specified in Section D.3.5. The mediation process will be considered to have been commenced as of the date one party delivers to the other its request in writing to mediate. The mediator shall be an individual mutually acceptable to both parties, but in the absence of agreement each party shall select a temporary mediator and the temporary mediators shall jointly select the permanent mediator. Each party shall pay its own costs for the time and effort involved in mediation. The cost of the mediator shall be split equally between the two parties. Both parties agree to exercise their best effort in good faith to resolve all disputes in mediation. Participation in mediation is a mandatory requirement of both the Owner and the Contractor. The schedule, time and place for mediation will be mutually acceptable, or, failing mutual agreement, shall be as established by the mediator. The parties agree to comply with Owner's administrative rules governing the confidentiality of mediation, if any, and shall execute all necessary documents to give effect to such confidentiality rules. In any event, the parties shall not subpoena the mediator or otherwise require the mediator to produce records, notes or work product, or to testify in any future proceedings as to information disclosed or representations made in the course of mediation, except to the extent disclosure is required by law.

**D.3.7** Unless otherwise directed by Owner's Authorized Representative, Contractor shall proceed with the Work while any Claim of Contractor is pending, including a Claim for additional compensation or additional Contract Time resulting from Change Order Work. Regardless of the review period or the final decision of the Owner's Authorized Representative, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease Work without a written stop work order from the Owner or Owner's Authorized Representative.

## **SECTION E: PAYMENT**

### **E.1 APPLICATIONS FOR PAYMENT**

**E.1.1** Payment will be made at the contract unit or lump sum price for each item designated in the bidding form as accepted. Completion and submittal of reports, collection of samples and sample containers, all water, mudding agents, alignment test pipe and test, drive shoe, temporary casing, measuring equipment, cleanup, cleaning and disinfection, capping, drilling and test water discharge erosion repair and all other work, materials and equipment related to well drilling which is not included in the Contractor's proposal are considered incidental to Mobilization and separate payment will not be made therefore.

The City shall make progress payments on the Contract monthly as Work progresses. Payments shall be based upon estimates of Work completed and the Schedule of Values. All payments shall be approved by the City's Authorized Representative. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein.

Contractor shall submit an application for each payment to the City's Authorized Representative and, if required,

receipts or other vouchers showing payments for materials and labor including payments to Subcontractors. The Contractor's application for payment shall include a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values, which shall aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:

"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore, has not been received. Signed: \_\_\_\_\_

2.1 Generally, request for payment will be accepted only for materials that have been installed or have been delivered to the job site and are secured from damage or theft. Under special conditions, payment requests for stored materials that are off-site will be accepted only at the City's sole discretion and only if all the following conditions are met:

(a) The request for stored material shall be submitted at least 30 days in advance of the Application for Payment on which it appears. Requests for payment shall be entertained for major equipment, components or expenditures only.

(b) The Contractor shall submit paid invoices showing the quantity and cost of the material stored with the application for payment that is to pay for the materials.

(c) The material shall be stored in a bonded warehouse and City's Authorized Representative shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.

(d) The Contractor shall name the CITY as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A certificate noting this coverage shall be issued to the CITY.

(e) Payments shall be made for material only. The submitted invoice amount shall be reduced by the cost of transportation and for the cost of an inspector to check the delivery at out of town storage sites. The cost of said inspection shall be born solely by the Contractor.

(f) Payment for stored materials shall in no way indicate acceptance of the materials or waive any rights under this Contract for the rejection of the Work or materials not in conformance with the Contract Documents.

(g) All required documentation must be submitted with the respective Application for Payment.

2.2 The CITY reserves the right to withhold payment for Work which has been demonstrated or identified as failing to conform to the Contract Documents.

Contractor shall submit itemized applications typed on AIA Document G702, Application and Certificate for Payment, together with Continuation Sheets AIA Document G703.

Forms can be ordered from:

Portland Chapter AIA; 403 NW 11<sup>th</sup> Ave; Portland, OR 97209; (503) 223-8757

American Institute of Architects; Box 60; Williston, VT 05495; (800) 365-2724

## **SECTION F: JOB SITE CONDITIONS**

### **F.1 USE OF PREMISES**

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, law, ordinances, permits or directions of the Owner's Authorized Representative. Contractor shall follow the Owner's Authorized Representative's instructions regarding use of premises, if any.

### **F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC**

**F.2.1** Contractor shall maintain continuous and adequate protection of all of the Work from damage, and shall protect the Owner's Authorized Representative, Owner's workers and property, and the public from injury or loss arising in connection with this Contract. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.

**F.2.2** Contractor shall designate a responsible employee or associate on the Work site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner's Authorized Representative. The Owner's Authorized Representative has no responsibility for Work site safety. Work site safety is the responsibility of the Contractor.

**F.2.3** Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make full restitution. Contractor shall report, immediately in writing, to the Owner's Authorized Representative, all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.

**F.2.4** Contractor shall at all times, direct its activities in such a manner as to minimize adverse effects on the environment. Handling

of all materials will be conducted so no release will occur that may pollute or become hazardous.

**F.2.5** In an emergency affecting the safety of life or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner's Authorized Representative, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner's Authorized Representative. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with section D.

### **F.3 CLEANING UP**

From time to time as may be ordered by the Owner and, in any event, immediately after completion of the Work, the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four hours after notification by the Owner the work may be done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

Contractor is responsible for a complete clean-up of the area in which they work.

### **F.5 ENVIRONMENTAL CONTAMINATION**

**F.5.1** Contractor will be held responsible for and shall indemnify, defend (with counsel of Owner's choice) and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, (including attorney fees), or any of them, resulting from all spills, releases, discharges, leaks and disposal of any hazardous substances, including storage, transportation, and handling during the performance of the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to perform in accordance with the Contract Documents. Nothing in this section F.5.1 shall limit Contractor's liability or responsibility under Section G.3 of this Contract.

1. Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and proper regulatory agencies in a manner that complies with applicable federal, state, and local laws and regulations. Cleanup shall be at no cost to the Owner and be performed by properly qualified personnel.
2. Contractor shall obtain the Owner's written consent prior to bringing onto the Work site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably similar terms are used in any applicable federal, state, or local statutes, rules or ordinances. Notwithstanding such written consent from the Owner, the Contractor, at all times, shall:
  - (i) properly handle, use and dispose of all pollutants and hazardous substances or materials brought onto the Work site, in accordance with all applicable federal, state, or local statutes, rules, or ordinances;
  - (ii) be responsible for any and all spills, releases, discharges, or leaks of (or from) pollutants or hazardous substances or materials which Contractor has brought onto the Work site; and
  - (iii) promptly clean up, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all applicable federal, state, or local statutes, rules or ordinances.

**F.5.2** Contractor shall report all reportable quantity releases to applicable federal, state, and local regulatory and emergency response agencies. Reportable quantities are found in 40 CFR Part 302, Table 302.4 for hazardous substances and in OAR Chapter 340 Division 108 for all products addressed therein. Upon discovery, regardless of quantity, Contractor must telephonically report all releases to the Owner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report. Such written report shall contain, as a minimum:

1. Description of items released (identity, quantity, manifest no., and all other documentation required by law.)
2. Whether amount of items released is EPA/DEQ reportable, and, if so, when it was reported.
3. Exact time and location of release, including a description of the area involved.
4. Containment procedures initiated.
5. Summary of communications about the release Contractor has had with members of the press or State or local officials other than Owner.
6. Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue.

7. Personnel injuries, if any, resulting from, or aggravated by, the release.

## **F.6 ENVIRONMENTAL CLEAN UP**

**F.6.1** Unless disposition of environmental pollution is specifically a part of this Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by this Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl (PCB), or petroleum, and any substances, materials or wastes regulated in 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or wellbeing of Contractor's or any Subcontractor's work force.

**F.6.2** Upon being notified by Contractor of the presence of hazardous substance(s) on the project site, Owner shall arrange for the proper disposition of such hazardous substance(s).

## **F.7 FORCE MAJEURE**

A party to this Contract shall not be held responsible for delay or default due to Force Majeure acts, events or occurrences unless they could have been avoided by the exercise of reasonable care, prudence, foresight, and diligence by that party. The Owner may terminate this Contract upon written notice after determining that delay or default caused by Force Majeure acts, events or occurrences will reasonably prevent successful performance of the Contract.

# **SECTION G: INDEMNITY, BONDING, AND INSURANCE**

## **G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY**

**G.1.1** Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under this Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, personnel, or agents.

**G.1.2** With regard to the Contractor's performance in connection with or incidental to the Work, but excluding its performance of professional services and the indemnification and hold harmless aspects thereto as set forth below in this Section, the Contractor hereby releases and shall indemnify, defend, and hold harmless the City, its officials, employees, agents and volunteers from and against any and all claims, costs, damages, lawsuits, penalties, liens, losses and/or liabilities of any kind or nature, including all expenses of investigating and defending against same, including reasonable attorney fees and costs at trial and on appeal, that arise from or are connected with or are directly or indirectly caused or claimed to be caused in whole or in part by the fault or negligent, reckless or willful acts or omissions of the Contractor and/or its agents, employees or subcontractors in performing Work herein; provided, however, that the Contractor's duty to release, indemnify and hold harmless shall not include any liability arising from the established sole negligence or willful misconduct of the City, its officials, employees, agents and volunteers.

With regard to the Contractor's performance of professional services, Contractor hereby releases and shall indemnify, defend, and hold harmless the City, its officials, employees, agents and volunteers from and against any and all claims, costs, damages, lawsuits, penalties, liens, losses and/or liabilities of any kind or nature, including all expenses of investigating and defending against same, including reasonable attorney fees and costs at trial and on appeal, arising from the willful misconduct or negligent acts, errors or omissions of the Consultant and/or its agents, employees or subcontractors associated with the Work.

This section shall survive acceptance of the Work and completion of the Contract, including any applicable warranty period. In any and all claims against City, its officials, employees, agents or volunteers, the amount or type of any workers' compensation or other benefits paid or payable to an injured person shall not affect the Contractor's obligations of this section, nor shall the Contractor's obligations under this section be affected by any limitation in the amount or type of liability or the amount or type of available insurance coverage.

## **G.2 PERFORMANCE AND PAYMENT SECURITY, PUBLIC WORKS BOND**

**G.2.1** If required by the Contract Documents, the Contractor shall furnish and maintain in effect at all times during the Contract Period, a performance bond in a sum equal to the Contract Price, and/or a separate payment bond also in a sum equal to the Contract Price.

Bonds shall not be canceled without the City of Prineville's consent, nor shall the City release them prior to Contract completion. Bonds must be originals. Faxed or photocopied Bond Forms shall not be accepted.

**G.2.2** Bond forms furnished by the Owner and notarized by awarded Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.

**G.2.3** Before starting Work the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond in the amount of \$30,000 as required by, ORS 279C.836, unless otherwise exempt under those provisions. This bond is in addition to the performance bond and payment bond requirements.

The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting the Subcontractor to start Work.

**G.2.4** With this Contract, Contractor is furnishing two bonds, a performance bond in a sum equal to the Contract Price and a separate Payment Bond also in a sum equal to the contract price. Each bond shall be in a form acceptable to the City Attorney in the amount of \_\_\_\_\_ **Dollars and 00 Cents** (\$ \_\_\_\_\_), to insure full compliance, execution and performance of this Contract by the Contractor in accordance with all its terms and provisions.

### **G.3 INSURANCE**

**G.3.1 Primary Coverage:** Insurance carried by Contractor under this Contract shall be the primary coverage, and the Owner's insurance is excess and solely for damages or losses for which the Owner is responsible. The coverage's indicated are minimums unless otherwise specified in the Contract Documents.

**G.3.2 Workers' Compensation and Employer Liability Insurance Required for All Workers Who Are Not Exempt:**

Contractor shall submit proof of Workers' Compensation Insurance for all persons who are "workers" as defined in ORS 656.005. A person who works under the Contractor's direction and control or the Contractor's right to control is a person for whom the Contractor must show proof of coverage unless the "worker" is a "non-subject worker" exempts from workers compensation insurance requirements under ORS 656.027. Out-of-state employers must provide Oregon workers' compensation coverage for their workers who work in Oregon, or show proof of extraterritorial coverage as per ORS 656.126. All Contractors and subcontractors required to procure and maintain Workers' Compensation Insurance shall also procure and maintain in full force and effect for the duration of Contractor's or subcontractor's Work under this Contract Employer Liability Insurance with a combined single limit, or the equivalent, of not less than \$500,000 each employee per accident for bodily injury by accident or disease.

Contractor shall require and ensure that each of its subcontractors who provide labor or services in connection with this Contract provide Oregon workers' compensation coverage for all their subject workers as required by ORS 656.017 and shall keep on file a certificate of insurance from each subcontractor and anyone else directly employed by either the Contractor or subcontractor.

The Contractor should consult with its own insurance agent to determine if any person who is engaged by Contractor to perform any services under this Contract is a "subject worker" for whom Contractor must provide workers compensation insurance. Contractor may declare itself exempt from this insurance requirement if it is not an "employer" who contracts to pay remuneration for and secures the right to direct and control the services of any person, as per ORS 656.006(13), to perform such services. A Contractor who makes that declaration and who does not provide that insurance may be deemed a non-complying employer under Oregon law. **A contractor who makes that declaration hereby agrees to hold City harmless from and indemnify City against any and all claims for compensation benefits made against the City by subject workers employed by the Contractor to do any of the work of the Contract.** A Contractor who declares itself exempt from providing the Workers Compensation insurance coverage otherwise required by this Contract shall make that declaration in signed and dated writing to be attached to this Contract.

**G.3.3 Commercial General Liability:** Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Commercial General Liability Insurance covering bodily injury and property damage in a form and with coverage's that are satisfactory to the City. This insurance shall include personal injury liability, products and completed operations, and contractual liability coverage for the indemnity provided under this Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis. Combined single limit per occurrence shall not be less than \$1,000,000 for each job site or location. Each annual aggregate limit shall not be less than \$2,000,000.

**COMMERCIAL GENERAL LIABILITY INSURANCE**

☒ **Required;** ☐ **Not Required.**

The policy shall be written on an occurrence basis on ISO Form CG 00 01 (Commercial General Liability Coverage Form), or its equivalent, and shall include contractual liability covering the assumption of the tort liability (including defense costs) of another party by written contract for both ongoing operations and completed operations under this contract. The City of Prineville and its officials, employees, agents and volunteers shall be named as additional insured's under ISO Form CG 2010 (Additional Insured's – Owners, Lessees or Contractors – Scheduled Person or Organization), or its equivalent, and CG 2037 (Additional Insured – Owners Lessees or Contractors – Completed Operations), or its equivalent, with respect to the Work to be provided under this Contract. The commercial general liability insurance coverage required by this Contract is with respect only to the Work described in this Contract, and has no relationship to, or bearing upon, other projects of the insured and is primary to and non-contributory with any City insurance or self-insurance program.

#### **G.3.4 Automobile Liability:**

Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Automobile Liability Insurance covering owned, non-owned and/or hired vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Combined single limit per occurrence shall not be less than \$2,000,000, or the equivalent.

☒ **Required;** ☐ **Not Required.**

Automobile Liability Insurance on ISO Form CA 00 01 (Business Auto Coverage), or its equivalent, with an each accident limit of not less than ☒ \$1,000,000, or ☐ \$2,000,000 covering, but not limited to, liability for bodily injury and property damage, for “any auto,” including owned, non-owned and hired autos used in connection with the performance of the Work. The City of Prineville and its officials, employees, agents and volunteers shall be named additional insured's under Endorsement CA 20 48 (Designated Insured), or its equivalent, if Contractor's Work entails transporting people for the City. The automobile liability insurance required by this Contract is primary to and non-contributory with any City insurance or self-insurance program; any deductible cannot exceed \$5000. If Contractor is declaring Contractor excused from any requirement to provide Automobile Liability Insurance coverage because Contractor does not use an automobile in connection with Work under this Contract, Contractor may initial here: \_\_\_\_\_; otherwise Contractor shall procure and maintain the required insurance.

#### **G.3.5 WAIVER OF SUBROGATION**

☒ **REQUIRED;** ☐ **NOT REQUIRED.**

If Waiver of Subrogation is required, Contractor hereby waives Contractor's right to recover from the City, and its officers, agents, employees and volunteers for any damages arising out of Work performed under this Contract and covered by insurance. Any Commercial General Liability Insurance policy and/or Automobile Liability Insurance policy required under this Contract shall be endorsed to provide for a waiver of underwriter's rights to subrogation as to additional insured's.

#### **G.3.6 INSURANCE CERTIFICATION; OTHER INSURANCE REQUIREMENTS**

Before Contractor commences Work under this Contract, Contractor shall furnish City, through its Risk Manager, with acceptable certificates evidencing the types, amounts and issuers of insurance coverage meeting the minimum requirements of this Contract. The certificate shall specify all of the parties who are Additional Insured's. If a certificate of insurance coverage is unavailable from a particular insurer, alternative proof of insurance coverage acceptable to City shall be arranged. Renewal certificates of insurance shall be furnished no later than 15 days before the expiration of the policy. Any deductibles or self-insured retentions must be stated on the certificate of insurance, which shall be sent to and approved by City's Risk Manager in advance to commencement of Work under this contract.

In all instances concerning all forms of insurance required by this Contract:

- a. The insurance shall be issued by a company authorized to do insurance business in the State of Oregon or by a non-admitted insurer subject to the Oregon Surplus Lines Law (ORS 735.400 to 735.495);
- b. Upon request, complete copies of insurance policies, trust agreements, etc. shall be provided to City;
- c. Contractor shall be financially responsible for all pertinent deductibles, self-insured retentions and/or self-insurance amounts;
- d. Umbrella or Excess Liability Insurance may be used to achieve the above minimum liability limits, so long as policy is endorsed to state it is “As Broad as Primary Policy.” If Umbrella or Excess policy is evidenced to comply with minimum limits, a copy of the Underlying Schedule from the Umbrella or Excess Liability Insurance policy may be required;
- e. Contractor shall provide City not less than 30 days written notice of Contractor's intent to cancel, terminate or make any material change affecting required insurance coverage;
- f. Until such time as the insurance is no longer required by the City, Contractor shall provide the City with renewal or replacement evidence of insurance no less than 15 days before the expiration or replacement of the required insurance. If at any time during the period when insurance is required by the Contract, an insurer shall fail to comply with the requirements of this Contract, as soon as Contractor has knowledge of any such failure, Contractor shall promptly notify

- the City and replace such insurance with an insurer meeting the requirements
- g. Except for Professional Liability Insurance, the insurance shall be provided by a carrier with A.M. Best's Rating of A- or better and Financial Performance Rating of 7 or better. Contractor's Professional Liability Insurance policy shall be written by an insurer satisfactory to City and may be written on a claims made basis, provided Contractor, at Contractor's own expense, maintains the Professional Liability Insurance in full force for not less 24 months following completion of this Contract; and
  - h. The commercial general liability insurance and automobile liability insurance provided by Contractor and its subcontractors shall apply on a primary basis and be required to respond and pay prior to any other available coverage. Any commercial general liability insurance maintained by the City shall be excess of and shall not contribute with the commercial general liability insurance provided by Contractor and its subcontractors.

City reserves the right to review the types of coverage's and limits of insurance required herein from time to time. In the event that City changes its insurance requirements after this Contract has been signed, City will provide notice to Contractor of the new requirements. Contractor shall endeavor to comply with the new requirements and provide City with updated evidence of coverage. Otherwise, City shall have the right to terminate the Contract.

**G.3.7 Additional Insured:** The liability insurance coverage, except Professional Liability if included, required for performance of this Contract shall include the City of Prineville, its officers, employees and agents, as Additional Insured's but only with respect to the Contractor's activities to be performed under this Contract.

If Contractor cannot obtain an insurer to name the City of Prineville, its officers, employees and agents, as Additional Insured's, Contractor shall obtain at Contractor's expense, and keep in effect during the term of this Contract, Owners and Contractors Protective Liability Insurance, naming the City of Prineville, its officers, employees and agents as Named Insured's with not less than a \$1,500,000 limit per occurrence. This policy must be kept in effect for 12 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to its issuance of a Notice to Proceed.

**G.3.8 Notice of Cancellation or Change:** There shall be no cancellation, material change, potential exhaustion of aggregate limits or intent not to renew insurance coverage's without thirty (30) Days written notice from the Contractor or its insurer to the Owner. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverage's provided to the City of Prineville, its officers, employees and agents.

**G.3.9 Certificate(s) of Insurance:** As evidence of the insurance coverage required by this Contract, the Contractor shall furnish certificate of insurance to the Owner prior to its issuance of a Notice to Proceed. The certificate will specify all of the parties who are Additional Insured's or Loss Payees. Insurance coverage required under this Contract shall be obtained from insurance companies or entities acceptable to Owner and authorized to do business in Oregon. The certificates will also specify that there shall be no cancellation, material change, potential exhaustion of aggregate limits or intent not to renew insurance coverage's without thirty (30) Days written notice from the insurer to the Owner. To the extent Certificates of Insurance contain words to the effect that Contractor shall "endeavor to send notice of cancellation" or similar language, Contractor shall require its insurer to send such notice by making sure that the words "endeavor to" or similar words are removed from the Certificate. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be approved by the Owner in writing prior to issuance of a Notice to Proceed and is subject to Owner's approval.

**Insurance carriers shall not be "surplus lines carriers," and shall certify as to such in each certificate. Contractor's insurance shall be primary and noncontributory with any other insurance or self-insurance. In all instances, City's insurance shall be excess to the limits set forth above.**

## **SECTION H: SCHEDULE OF WORK**

### **H.1 CONTRACT PERIOD**

Time is of the essence of this Contract. The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein. Contractor shall commence Work no sooner than the 17<sup>th</sup> day of June, 2019 unless directed otherwise. Unless specifically extended by a change order, all Work shall be completed by the end of the Contract Period.

### **H.2 SCHEDULE**

Contractor shall provide, by or before the pre-construction conference, a detailed schedule for review and acceptance by the Owner. The submitted schedule must illustrate Work by significant project components, significant labor trades, and long lead items, broken

down by building and/or floor where applicable. Acceptance of the schedule by the Owner does not constitute agreement by the Owner as to the Contractor's sequencing, means, methods, or durations.

### **H.3 PARTIAL OCCUPANCY OR USE**

The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them for payments, security, insurance or self-insurance, maintenance, heat, utilities, and damage to the Work, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents with respect to such portion of the Work. Approval by the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

### **H.4 LIQUIDATED DAMAGES**

Failure to complete the Work by the specified time will result in actual damage to the Owner. Since actual damages would be difficult or impossible to determine, it is agreed that the Contractor shall pay to the Owner, not as a penalty but as liquidated damages, **\$ 500.00 per day** for each day elapsed past the date set for Substantial Completion, until such time as Substantial Completion has been obtained. Liquidated damages may be deducted by the Owner from any funds due the Contractor.

## **SECTION I: CORRECTION OF WORK**

### **I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT**

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Contractor shall be allowed a period of no longer than thirty (30) Days for completion of defective (Punch list) work. At the end of the thirty-day period, or earlier if requested by the Contractor, Owner shall inspect the Work. Should the Work not be complete, and all corrections made, the costs for all subsequent re-inspections shall be borne by the Contractor. If Contractor fails to complete the Punch list work within the thirty (30) Day period, without affecting Contractor's obligations Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand.

### **I.2 WARRANTY WORK**

**I.2.1** Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of final payment except for latent defects which will be remedied by the Contractor at any time they become apparent. The Owner shall give Contractor notice of defects with reasonable promptness. Contractor shall perform such warranty work within a reasonable time after Owner's demand. If Contractor fails to complete the warranty work within such period as Owner determines reasonable, or at any time in the event of warranty work consisting of emergency repairs, without affecting Contractor's obligations, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand. The Contractor shall perform the warranty Work by correcting defects within twenty-four (24) hours of notification by Owner, unless otherwise specified in the Contract Documents. Should the Contractor fail to respond within the specified response time, the Owner may, at its option, complete the necessary repairs using another contractor or its own forces. If Owner completes the repairs using Owner's own forces, Contractor shall pay Owner at the rate of one and one-half (1½) times the standard hourly rate of Owner's forces, plus related overhead and any direct non-salary costs. If Owner completes the repairs using another contractor, Contractor shall pay Owner the amount of Owner's direct costs billed by the other contractor for the work, plus the direct salary costs and related overhead and direct non-salary expenses of Owner's forces who are required to monitor that contractor's work. Work performed by Owner using Owner's own forces or those of another contractor shall not affect the Contractor's contractual duties under these provisions, including warranty provisions.

Prior to acceptance of the construction, the City of Prineville Engineering Division will require a (1) year warranty agreement on materials and workmanship which shall be executed between the City of Prineville and the Contractor.

The warranty shall be comprised of a bond or other approved security in a value of **12%** of the original improvement construction cost.



**I.2.2** This provision does not negate guarantees or warranties for periods longer than one year including without limitation such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.

**I.2.3** In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until affected Work has been accepted in writing by the Owner's Authorized Representative.

**I.2.4** Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

**I.2.5** If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be adjusted as appropriate and equitable. Such adjustment shall be effectuated whether or not final payment has been made.

## **SECTION J: SUSPENSION AND/OR TERMINATION OF THE WORK**

### **J.1 OWNER'S RIGHT TO SUSPEND THE WORK**

**J.1.1** The Owner or the Owner's Authorized Representative has the authority to suspend portions or all of the Work due to the following causes:

1. Failure of the Contractor to correct unsafe conditions;
2. Failure of the Contractor to carry out any provision of the Contract;
3. Failure of the Contractor to carry out orders;
4. Conditions, in the opinion of the Owner's Authorized Representative, which are unsuitable for performing the Work;
5. Time required to investigate differing site conditions;
6. Any reason considered to be in the public interest.

**J.1.2** Contractor and the Contractor's surety shall be notified in writing of the effective date and time of the suspension and shall be notified in writing to resume Work.

### **J.2 CONTRACTOR'S RESPONSIBILITIES**

**J.2.1** During the period of the suspension, Contractor is responsible to continue maintenance at the project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.

**J.2.2** When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the project in every respect as though its prosecution had been continuous and without suspension.

### **J.3 COMPENSATION FOR SUSPENSION**

Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's forces or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension. If the suspension was caused by acts or omissions of the Owner, the Contractor shall be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party owes the other for the impact.

## **J.4 OWNER'S RIGHT TO TERMINATE CONTRACT**

**J.4.1** The Owner may, without prejudice to any other right or remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:

1. If Contractor should voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in-possession or the Trustee for the estate fails to assume the Contract within a reasonable time;
2. If Contractor should make a general assignment for the benefit of Contractor's creditors;
3. If a receiver should be appointed on account of Contractor's insolvency;
4. If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to prosecute the work according to the approved schedule.

Examples of failure to prosecute the Work according to the approved schedule shall include, but are not be limited to, the following:

1. Failure to submit an executed Contract with bonds and insurance certificates within 10 days after notice of proposal award;
  2. Failure to obtain required permits;
  3. Failure to submit documentation that materials and equipment needed for the work are and will be available.
  4. Failure to submit documentation that materials and equipment needed for the work have been ordered from suppliers within 10 days after submittal of the executed Contract;
  5. Failure to submit a work schedule acceptable to the Owner prior to the pre-construction conference or failure to submit (a) revised work schedule(s), if one is required;
  6. Failure to timely submit a traffic control plan, if one is required;
  7. Failure to install traffic control devices, if any are required, according to the approved schedule;
  8. Failure to request utility locates (if applicable) within 10 work days after Notice to Proceed.;
  9. Failure to begin, or to perform a significant amount of work on, a task that is on the critical path in the latest work schedule within 5 work days after the start date shown for that task in the schedule, or
  10. Failure to submit a request for a delayed start and justification(s) for said request, and failure to obtain the Owner's approval of said request. Owner approval of such a request shall not be construed to be approval of a delay in any subsequent task on the schedule.
5. If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner or its Authorized Representative; or
  6. If Contractor is otherwise in material breach of any part of the Contract.
  7. If Contractor fails to complete the work according to H.2. Failure to comply with work.

**J.4.2** At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and in addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

**J.4.3** Owner may:

1. Require the Contractor to replace one or more poorly performing employees,
2. Require the Contractor to replace a subcontractor,
3. Require the Contractor to replace poorly performing construction equipment.

When the Contract, or any portion thereof, is terminated before completion of all items of work in the Contract, no claim for loss profits for work not performed will be allowed.

## **J.5 TERMINATION FOR CONVENIENCE**

**J.5.1** Owner may terminate the Contract in whole or in part whenever Owner determines that termination of the Contract is in the best interest of the public.

**J.5.2** The Owner will provide the Contractor with seven (7) Days' prior written notice of a termination for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination.

## **J.6 ACTION UPON TERMINATION**

**J.6.1** Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.

**J.6.2** As directed by the Owner, Contractor shall upon termination transfer title and deliver to the Owner all project documents, information, and other property that, if the Contract had been completed, would be required to be furnished to the Owner.

## **SECTION K: CONTRACT CLOSE OUT**

### **K.1 AFFIDAVIT/RELEASE OF LIENS AND CLAIMS**

As a condition of final payment, the Contractor shall submit to the Owner's Authorized Representative a notarized affidavit/release of liens and claims form, in a form satisfactory to Owner, which states that all Subcontractors and suppliers have been paid in full, all disputes with property owners have been resolved, all obligations on the project have been satisfied, all monetary claims and indebtedness have been paid, and that, to the best of the Contractor's knowledge, there are no claims of any kind outstanding against the project. The Contractor shall indemnify, defend (with counsel of Owner's choice) and hold harmless the Owner from all claims for labor and materials finished under this Contract. The Contractor shall furnish complete and valid releases or waivers, satisfactory to the Owner, of all liens arising out of or filed in connection with the Work.

### **K.2 COMPLETION NOTICES**

Contractor shall provide the CITY a written notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the CITY and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the punch list accompanying the Certificate. Both completion notices must be signed by the Contractor and by the City's Authorized Representative to be valid. The CITY shall provide the final signature on the notices. The notices shall take effect on the date they are signed by the CITY.

Substantial Completion of an operating facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of 30 continuous days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the City's Authorized Representative. All equipment contained in the Work, plus all other components necessary to enable the CITY to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a punch list be prepared by the City's Authorized Representative with submission of the request for the Substantial Completion notice.

**Final Completion shall be when all Work is complete in accordance with the Contract Documents**

### **K.3 EXTRA MATERIALS**

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the Specifications, prior to final payment. Delivery point for extra materials shall be designated by the Owner's Authorized Representative.

### **K.4 OTHER CONTRACTOR RESPONSIBILITIES**

The Contractor shall be responsible for returning to the Owner all items issued during construction such as keys, security passes, site admittance badges, and all other pertinent items. The Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner.

### **K.5 SURVIVAL**

All warranty and indemnification provisions of this Contract, and all of Contractor's other obligations under this Contract that are not fully performed by the time of Final Completion or termination, shall survive Final Completion or any termination of the Contract.

**WHEREFORE,** the parties, by their signature below, acknowledge having read and understood the Contract and agree to be bound by its terms and conditions.

**CITY OF PRINEVILLE, OREGON**

\_\_\_\_\_.

BY: \_\_\_\_\_  
Authorized Representative

BY: \_\_\_\_\_

DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

## ATTACHMENT "B": PERFORMANCE BOND (Page 1 of 2)

KNOW ALL MEN BY THESE PRESENTS, That we \_\_\_\_\_ as PRINCIPAL, and a corporation duly authorized to act as a surety company in Oregon, as SURETY, are jointly and severally held and bound unto the City of Prineville, Oregon, as Obligee, hereinafter called CITY, in the sum of, (\$ \_\_\_\_\_) , for the payment of which we jointly and severally bind ourselves, our heirs, successors, administrators and assigns, or our successors and assigns, firmly by these presents.

### THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the PRINCIPAL herein has made and entered into a certain Agreement with the CITY, a copy of which is attached hereto, whereby the said PRINCIPAL agrees to perform certain work and to furnish certain materials and to assume obligations, all in accordance with the terms, conditions, requirements, plans and specifications set out in said Agreement for the **"PRINEVILLE SENIOR CENTER REHABILITATION"** and

WHEREAS, said Agreement is a Public Contract within the meaning of that term as defined in Oregon Revised Statutes.

NOW, THEREFORE, if the PRINCIPAL herein shall faithfully and truly observe and comply with the terms, conditions, and provisions of said Agreement, in all respects, and shall well and truly and fully do and perform all matters and things by him undertaken to be performed under said Agreement, upon the terms set forth therein and within the time prescribed therein or as extended as provided therein, and shall, in all respects perform said Agreement according to law, then this obligation shall be void; otherwise to remain in full force and effect.

For value received, the SURETY hereby agrees that no change, extension of time, alteration or addition to the terms of the Agreement or the work to be performed thereunder, or the specifications accompanying the same shall in any way affect its obligations hereunder, and the SURETY expressly waives notice of any such change, extension, alteration, or addition.

Nonpayment of the bond premium will not invalidate this bond nor shall the CITY be obligated for the payment thereof.

**ATTACHMENT “B”: PERFORMANCE BOND (Page 2 of 2)**

This Bond is given and received under the authority of ORS Chapter 279, the provisions of which hereby are incorporated into this Bond and made a part hereof.

In Witness whereof, the parties hereto have caused this Bond to be executed in \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

PRINCIPAL:

By: \_\_\_\_\_

Title: \_\_\_\_\_

Attest: \_\_\_\_\_

SURETY:

By: \_\_\_\_\_

Title

By: \_\_\_\_\_

Attorney-in-Fact

By: \_\_\_\_\_

Agent

The Attorney-in-Fact, who executes this bond in behalf of the surety company, must attach a copy of his power-of- attorney as evidence of his/her authority. To each executed original of this bond there must be attached a complete set of the CONTRACT DOCUMENTS, as the term is defined in the GENERAL CONDITIONS, with all corrections, interlineations, signatures, etc., completely reproduced therein.

## ATTACHMENT "C": PAYMENT BOND (Page 1 of 2)

KNOW ALL MEN BY THESE PRESENTS, That we \_\_\_\_\_ as PRINCIPAL, and a corporation duly authorized to act as a surety company in Oregon, as SURETY, are jointly and severally held and bound unto the City of Prineville, Oregon, as Obligee, hereinafter called CITY, in the sum of, (\$ \_\_\_\_\_) , for the payment of which we jointly and severally bind ourselves, our heirs, successors, administrators and assigns, or our successors and assigns, firmly by these presents.

WHEREAS, PRINCIPAL has by written agreement dated \_\_\_\_\_ 2018, entered into an Agreement with CITY for construction of **PRINEVILLE SENIOR CENTER REHABILITATION**, in accordance with drawings and specifications which Agreement is by reference made a part hereof, and is hereinafter referred to as the Agreement.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that the PRINCIPAL shall promptly make payment to all claimants as hereinafter defined, for all labor and materials used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise, it shall remain in full force and effect, subject, however, to the following conditions:

(1) A claimant is defined as one having a direct Agreement with the PRINCIPAL or with a subcontractor of the PRINCIPAL for labor, material, or both, used or reasonably required for use in the performance of the Agreement, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Agreement.

(2) The above named PRINCIPAL and SURETY hereby jointly and severally agree with the CITY that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The CITY shall not be liable for the payment of any costs or expenses of any such suit.

(3) No Suit of action shall be commenced hereunder by any claimant"

(A) Unless claimant, other than one having a direct Agreement with the PRINCIPAL, shall have given written notice to any two of the following: the PRINCIPAL, the CITY, or the SURETY above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials

**ATTACHMENT "C": PAYMENT BOND (Page 2 of 2)**

were furnished, or for whom the work or labor was done or performed. Such notice shall be service by mailing the same by registered mail or certified mail, postage pre- paid, in an envelope addressed to the PRINCIPAL, CITY or SURETY, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State of Oregon, save that such service need not be made by a public officer"

(B) After the expiration of one (1) year following the date on which PRINCIPAL ceased work on said Agreement, in being understood, however, that if any limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

(C) Other than is a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District court for the district in which the project, or any part thereof, is situated, and not elsewhere.

(4) The amount of this bond shall be reduced by and to the extent of any payment of payments made in good faith hereunder, inclusive of the payment by SURETY of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

In the presence of:

\_\_\_\_\_  
Witness

BY : \_\_\_\_\_ (SEAL)  
PRINCIPAL

BY : \_\_\_\_\_ (SEAL)  
SURETY



**ATTACHMENT "D"**

**CONTRACTOR'S FINAL RELEASE AND WAIVER OF LIEN  
(SUBMIT THIS FORM AT TIME OF FINAL PAYMENT REQUEST)**

TO: CITY OF PRINEVILLE, OREGON

RE: "PRINEVILLE SENIOR CENTER REHABILITATION"

GENTLEMEN:

COMES NOW \_\_\_\_\_

doing business as \_\_\_\_\_

who being first duly sworn deposes and says:

That all sums due to suppliers, material-men, subcontractors, sub-subcontractors, employees and government agencies for wages, goods, services, products, or equipment furnished in connection with the above project have been paid in full. Except as hereinafter stated, this includes, but not limited to all State and Federal withholding taxes, worker's compensation insurance, Oregon unemployment insurance, FUTA unemployment insurance, and social security taxes.

The only obligations which have not been paid and which are known to us are as follows:

1. \_\_\_\_\_ \$ \_\_\_\_\_
2. \_\_\_\_\_ \$ \_\_\_\_\_
3. \_\_\_\_\_ \$ \_\_\_\_\_
4. \_\_\_\_\_ \$ \_\_\_\_\_
5. \_\_\_\_\_ \$ \_\_\_\_\_

If extra space is needed, please attach an extra sheet, date and sign.

WE HEREBY authorize you to pay from the remaining funds, the foregoing obligations by making a check payable to us and to the unpaid creditor/s jointly.

DATED this \_\_\_\_\_ day of \_\_\_\_\_, 2019

By: \_\_\_\_\_

Title: \_\_\_\_\_



# ATTACHMENT "E"

## City of Prineville Change Order Request

☐ CHANGE ORDER NO. \_\_\_\_\_

MODIFICATION NO. \_\_\_\_\_

DATE:

### CONTRACTOR

PROJECT PRINEVILLE SENIOR CENTER REHABILITATION	PROJECT NO. 4005-18-19
OWNER City of Prineville	ENGINEER

The following modification(s) to the Contract are hereby ordered (use additional pages if required):

Reason for modification:

Attachments (List supporting documents):

Contract Amount/Price \$	Contract Times (Calculate Days)
--------------------------	---------------------------------

Original \$ \_\_\_\_\_

Original Duration (Days) \_\_\_\_\_

Previous Contract  
Modification(s)  
(Add/Deduct) \$ \_\_\_\_\_

Previous Contract  
Modification(s)  
(Add/Deduct Days) \_\_\_\_\_

This Contract Modification  
(Add/Deduct) \$ \_\_\_\_\_

This Contract Modification  
Add/Deduct Days): \_\_\_\_\_

Revised Contract Amt. \$ \_\_\_\_\_

Revised Contract Time (Days): \_\_\_\_\_

The revised contract completion date is: \_\_\_\_\_

Owner	Contractor	Engineer Recommendation
By: _____ Date: _____	By: _____ Date: _____	By: _____ Date: _____



**ATTACHMENT "F"**

**CERTIFICATE OF SUBSTANTIAL COMPLETION**

Project Name	<b>PRINEVILLE SENIOR CENTER REHABILITATION</b>	Issuance Date	
Contractor		Contract No.	4005-18-19
		<input type="checkbox"/> <b>Complete</b> <input type="checkbox"/> <b>Partial</b>	

The work performed under this contract has been reviewed and is deemed to be substantially complete. The date of Substantial Completion is, therefore; established for the portion for the portion noted above as:

The Definition of the Date of Substantial Completion of the Work or designated portion noted above is the Date determined by the Public Works Department when construction is adequately complete, in accordance with the Contract Documents, so the Owner may occupy or utilize the work or portion noted above for its intended purpose, as detailed in the Contract documents.

A list of items to be completed or corrected (Punch List), prepared by the Contractor and amended by the amended by the Architect and Owner, is attached to this certified. The failure to include any items on this list does not alter the requirements of the Contract Documents. The date of commencement of warranties for items included in the Punch List will be the date of final payment unless agreed to, in writing, by the Owner and the Contractor.

**PUNCH LIST:**

A list of items to be completed or corrected, prepared by the Architect/Engineer, checked and augmented as required by the Prime Contractor or Construction Manager is appended hereto if applicable. The failure to include any item on such list does not relieve the Contractor of the responsibility to complete all work in accordance with the Contract documents.

The punch list consists of     items. The Contractor shall complete or correct the work on the punch list appended hereto by                     .

The owner accepts the Work or portion noted above as substantially complete as determined by the City of Prineville and will assume full possession thereof at 12:00 PM on October 14, 2019.

**PROJECT WARRANTY** In addition to other specific warranties required by these specifications, all work, including material and workmanship supplied by the Contractor shall be warranted to be free of defect for one (1) year from the date of written Final Acceptance by the City of Prineville. Prior to final payment on the contract, Contractor will be required to submit to the Owner a one (1) year warranty bond in an amount not to exceed 12% of the value of all improvements, to guarantee maintenance and performance for a period on not less than one year from the date of acceptance of the work completed.

Contractor

Authorized Representative

Date

Engineer

Authorized Representative

Date



**ATTACHMENT "G"**

**WARRANTY BOND**

BOND NO. \_\_\_\_\_

PROJECT NO. 4005-18-19 **"PRINEVILLE SENIOR CENTER REHABILITATION"**

WHEREAS, the City of Prineville (hereafter "Agency") and \_\_\_\_\_ (hereafter, "Principal") have entered into an agreement ("Agreement") dated, 20\_\_, whereby Principal agreed to complete certain designated public improvements relating to the 2018 Paving Project; and

WHEREAS, the Principal is required under the terms of the Agreement to furnish warranty security for the work performed pursuant to the Agreement, in the amount of the full amount of the Agreement (100%), to meet the warranty described in the Agreement for a period of one year following final acceptance by the City of said improvements.

NOW, THEREFORE, we, Principal, and \_\_\_\_\_ ("Surety"), are held and firmly bound unto City in the penal sum of \_\_\_\_\_ (\$ \_\_\_\_\_) lawful money of the United States, for the payment of which we bind ourselves, our heirs, successors, executors, and administrators, jointly and severally.

As part of the obligation secured hereby and in addition to the face amount specified, costs and reasonable expenses and fees shall be included, including reasonable attorneys' fees, incurred by City in successfully enforcing the obligation, all to be taxed as costs and included in any judgment rendered.

Surety shall provide the Agency with thirty (30) days' written notice of Principal's default prior to Surety terminating, suspending, or revoking the bond.

In witness whereof, this instrument has been duly executed by Principal and Surety on \_\_\_\_\_, 2018.

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Surety

By \_\_\_\_\_

\_\_\_\_\_  
Attorney-in-Fact

Address

\_\_\_\_\_ (ALL signatures to be properly notarized)





**ATTACHMENT “H”**

**REQUIRED FEDERAL AND STATE CONTRACT CLAUSES**

## Required Federal and State Contract Clauses

### Use for ALL Construction Contracts

#### 1. Source of Funds

Work under this contract will be funded [in part/in its entirety] with federal grant funds from the Oregon Community Development Block Grant program.

#### 2. Conflict of Interest

No employee, agent, consultant, officer, elected official or appointed official of the city or county grant recipient or any of its sub-recipients (sub-grantees) receiving CDBG funds who exercise or have exercised any functions or responsibilities with respect to CDBG activities who are in a position to participate in a decision making process or gain inside information with regard to such activities, may obtain a financial interest or benefit from the activity or have an interest or benefit from the activity or have an interest in any contract, subcontract or agreement with respect thereto, or the proceeds there under, either for themselves or those with whom that have family or business ties, during their tenure or for one year thereafter, in accordance with 24 CFR Part 570.489(h).

#### 3. Minority, Women and Emerging Small Business (*Instruction: Include if contract is \$10,000 or more*)

Before the final payment to Contractor is made, Contractor shall submit the attached "Minority, Women and Emerging Small Business Activity Report".

#### 4. Prohibition on the Use of Federal Funds for Lobbying

As evidenced by execution of this contract, Contractor certifies, to the best of their knowledge and belief that:

#### **CERTIFICATION REGARDING LOBBYING**

The undersigned certifies, to the best of his or her knowledge and belief, that:

- A. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.
- B. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- C. The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Signed (Contractor) \_\_\_\_\_

Title / Firm \_\_\_\_\_

Date \_\_\_\_\_

5. Prohibition on the Use of Lead-Based Paint

(Contracts and subcontracts residential for construction or rehabilitation)

The use of lead-based paint on any interior or exterior surfaces is prohibited.

6. Federal Labor Standards Provisions and Davis-Bacon Wage Rates

(Construction contracts in excess of \$2,000 and all subcontracts under a prime contract that exceeds \$2,000) The Federal Labor Standards Provisions (HUD-4010), located as part of this Exhibit, must be attached to this contract.

7. Public Works Bond

In accordance with ORS 279C.830(3) and before starting work on the Project, Contractor shall file a \$30,000 Public Works Bond with the Oregon Construction Contractors Board.

Contractor shall include a requirement in every subcontract which requires the subcontractor to file a \$30,000 Public Works Bond with the Oregon Construction Contractors Board in accordance with ORS 279C.830(3)(b) and before starting work on the Project.

8. Oregon Prevailing Wage Laws - Contractor shall pay each worker employed in the performance of this contract not less than the higher of the wage rate for the type of work being performed as set forth in either the Oregon Prevailing Wage set forth in the "Prevailing Wage Rates for Public Works Contracts in Oregon" or the applicable federal Davis-Bacon Wage Decision.

Contracts must include a provision that if the contractor fails to pay for labor and services, the agency can pay for them and withhold these amounts from payments to the contractor. There must also be a provision that the contractor must pay daily, weekly, weekend and holiday overtime as required.

9. Section 3 - Economic Opportunities for Low- and Very Low-Income Persons.

A. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3 shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

- B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.
- C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- D. The contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been in violation of the regulations in 24 CFR part 135.
- E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations in 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.
- F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD-assisted contracts.
- G. Contractor shall complete the required Section 3 report Form 60002, included as Exhibit 5C of the CDBG Grant Management Handbook and submit the completed form to the city/county grant recipient with the final construction pay estimate for the project.

## Activity Report

### Minority Women and Emerging Small Business

The **report** on the following page is to be completed by grantees, developers, sponsors, builders, agencies, and/or project owners for reporting contract and subcontract activities of \$10,000 or more under the following programs: Community Development Block Grants (entitlement and small cities); Urban Development Action Grants; Housing Development Grants; Multi-family Insured and Noninsured; Public and Indian Housing Authorities; and contracts entered into by recipients of CDBG rehabilitation assistance.

Contracts / subcontracts of less than \$10,000 need be reported only if such contracts represent a significant portion of your total contracting activity. Include only contracts executed during this reporting period.

This form has been modified to capture Section 3 contract data in columns 7g and 7i. Section 3 requires that the employment and other economic opportunities generated by HUD financial assistance for housing and community development programs shall, to the greatest extent feasible, be directed toward low- and very low-income persons, particularly those who are recipients of government assistance for housing. Recipients using this form to report Section 3 contract data must also use Part I of form HUD 60002 to report employment and training opportunities data. Form HUD 2516 is to be completed for public and Indian housing and most community development programs. Form HUD 60002 is to be completed by all other HUD programs including State administered community development programs covered under Section 3.

A Section 3 contractor / subcontractor is a business concern that provides economic opportunities to low- and very low-income residents of the metropolitan area (or non-metropolitan county), including a business concern that is 51 percent or more owned by low- or very low-income residents; employs a substantial number of low- or very low-income residents; or provides subcontracting or business development opportunities to businesses owned by low- or very low-income residents. Low- and very low-income residents include participants in Youthbuild programs established under Subtitle D of Title IV of the Cranston-Gonzalez National Affordable Housing Act.

The terms "low-income persons" and "very low-income persons" have the same meanings given the terms in section 3(b)(2) of the United States Housing Act of 1937. Low-income persons mean families (including single persons) whose incomes do not exceed 80 per centum of the median income for the area, as determined by the Secretary, with adjustments for smaller and larger families, except that the Secretary may establish income ceilings higher or lower than 80 per centum of the median for the area on the basis of the Secretary's findings that such variations are necessary because of prevailing levels of construction costs or unusually high or low-income families. Very low-income persons means low-income families (including single persons) whose incomes do not exceed 50 per centum of the median family income for the area, as determined by the Secretary with adjustments for smaller and larger families, except that the Secretary may establish income ceilings higher or lower than 50 per centum of the median for the area on the basis of the Secretary's findings that such variations are necessary because of unusually high or low family incomes.

Community Development Block Grant Management Handbook – 2017  
Page 5 of 11

## Activity Report

### Explanation of Codes

**1. Grantee:** Enter the name of the unit of government submitting this report.

**3. Contact Person:** Enter name and phone of person responsible for maintaining and submitting contract / subcontract data.

**7a. Grant Number:** Enter the HUD Community Development Block Grant Identification Number (with dashes). For example: B-32-MC-25-0034. For Entitlement Programs and Small City multi-year comprehensive programs, enter the latest approved grant number.

**7b. Amount of Contract / Subcontract:** Enter the dollar amount rounded to the nearest dollar. If subcontractor ID number was provided in 7f, the dollar figure would be for the subcontract only and not for the prime contract.

**7c. Type of Trade:** Enter the numeric codes (see table below) which best indicates the contractor's / subcontractor's service. If subcontractor ID number was provided in 7f, the type of trade code would be for the subcontractor only and not for the prime contractor. The "other" category includes supply, professional services and all other activities except construction and education / training activities.

**7d. Business Racial / Ethnic Code:** Enter the numeric code (see table below) which indicates the racial / ethnic character of the owner(s) and controller(s) of 51% of the business. When 51% or more is not owned and controlled by any single racial / ethnic category, enter the code that seems most appropriate. If the subcontractor ID number was provided, the code would apply to the subcontractor and not to the prime contractor.

**7e. Woman Owned Business:** Enter Yes or No.

**7f. Contractor Identification (ID) Number:** Enter the Employer (IRS) Number of the Prime Contractor as the unique identifier for prime recipient of HUD funds. Note that the Employer (IRS) Number must be provided for each contract / subcontract awarded.

**7g. Section 3 Contractor:** Enter Yes or No.

**7h. Subcontractor Identification (ID) Number:** Enter the Employer (IRS) Number of the subcontractor as the unique identifier for each subcontract awarded from HUD funds. When the subcontractor ID Number is provided, the respective Prime Contractor ID Number must also be provided.

**7i. Section 3 Contractor:** Enter Yes or No.

**7j. Contractor / Subcontractor Name and Address:** Enter this information for each firm receiving contract / subcontract activity only one time on each report for each firm.

**Federal Labor Standards Provisions****U.S. Department of Housing  
and Urban Development  
Office of Labor Relations****Applicability**

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

**A. 1. (i) Minimum Wages.** All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part



of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

**2. Withholding.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

**3. (i) Payrolls and basic records.** Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been

communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

**(ii) (a)** The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

**(b)** Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

**(1)** That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### 4. Apprentices and Trainees.

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who

is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by

the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

**(iii) Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

**6. Subcontracts.** The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

**7. Contract termination; debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

**10. (i) Certification of Eligibility.** By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be

awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

**(ii)** No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

**(iii)** The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

**11. Complaints, Proceedings, or Testimony by Employees.** No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

**B. Contract Work Hours and Safety Standards Act.** The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

**(1) Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

**(2) Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) **Withholding for unpaid wages and liquidated damages.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

**C. Health and Safety.** The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

**ATTACHMENT “I”**  
**FEDERAL DAVIS BACON WAGE DECISIONS**  
**See following pages**

General Decision Number: OR190049 02/22/2019 OR49

Superseded General Decision Number: OR20180049

State: Oregon

Construction Type: Building

Counties: Crook, Gilliam, Harney and Jefferson Counties in Oregon.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/04/2019
1	02/01/2019
2	02/22/2019

BROR0001-026 06/01/2018

#### CROOK AND JEFFERSON COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 38.00	19.83
TILE FINISHER.....	\$ 25.29	13.24
TILE SETTER.....	\$ 33.00	18.33
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BROR0001-027 06/01/2018

#### GILLIAM AND HARNEY COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 38.00	19.83
TILE FINISHER.....	\$ 25.29	13.24

TILE SETTER.....	\$ 33.00	18.33
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CARP0001-032 06/01/2018

Rates	Fringes
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Carpenters:

Including Metal stud installation and form work..	\$ 37.64	16.83
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CARP9001-004 06/01/2018

Rates	Fringes
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Acoustical Ceiling Installer & Drywall Hanger.....	\$ 37.64	16.83
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ELEC0112-007 06/01/2018

GILLIAM COUNTY

Rates	Fringes
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ELECTRICIAN.....	\$ 43.50	20.54
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ELEC0112-008 06/01/2015

GILLIAM COUNTY

Rates	Fringes
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ELECTRICIAN (Low voltage wiring for alarms and low voltage wiring for computers.)...	\$ 26.75	11.46
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ELEC0280-020 01/01/2019

CROOK AND JEFFERSON COUNTIES

Rates	Fringes
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ELECTRICIAN.....	\$ 43.55	19.25
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ELEC0280-021 01/01/2018

CROOK AND JEFFERSON COUNTIES

Rates	Fringes
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ELECTRICIAN (Low voltage wiring for alarms and low voltage wiring for computers.)...	\$ 30.13	14.40
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ELEC0659-017 01/01/2019

HARNEY COUNTY

Rates	Fringes
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ELECTRICIAN		
Low voltage for computers...	\$ 16.00	3%+10.65
Low Voltage Wiring for		
Alarms.....	\$ 28.40	13.35

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ELEC0659-018 01/01/2019

## HARNEY COUNTY

	Rates	Fringes
ELECTRICIAN.....	\$ 35.19	16.80
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ENGI0701-027 01/01/2018		

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 41.65	14.35
GROUP 1A.....	\$ 43.73	14.35
GROUP 1B.....	\$ 45.82	14.35
GROUP 2.....	\$ 39.74	14.35
GROUP 3.....	\$ 38.59	14.35
GROUP 4.....	\$ 37.51	14.35
GROUP 5.....	\$ 36.27	14.35
GROUP 6.....	\$ 33.05	14.35

## POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: CRANE: Helicopter Operator, when used in erecting work; Whirley Operator, 90 ton and over; LATTICE BOOM CRANE: Operator 200 tons through 299 tons, and/or over 200 feet boom; HYDRAULIC CRANE: Hydraulic Crane Operator 90 tons through 199 tons with luffing or tower attachments

GROUP 1A: HYDRAULIC CRANE: Hydraulic Operator, 200 tons and over (with luffing or tower attachment); LATTICE BOOM CRANE: Operator, 200 tons through 299 tons, with over 200 feet boom;

GROUP 1B: LATTICE BOOM CRANE: Operator, 300 tons through 399 tons with over 200 feet boom; Operator 400 tons and over

GROUP 2: CRANE: Cableway Operator, 25 tons and over; HYDRAULIC CRANE: Hydraulic crane operator 90 tons through 199 tons (without luffing or tower attachment); TOWER/WHIRLEY OPERATOR: Tower Crane Operator; Whirley Operator, under 90 tons; LATTICE BOOM CRANE: 90 through 199 tons and/or 150 to 200 feet boom; HYDRAULIC CRANE: Hydraulic crane operator, 50 tons through 89 tons (with luffing or tower attachment); BLADE: Auto Grader; Blade Operator-Robotic; Bulldozer: Over 120,000 lbs and above; Bulldozer: D-10, D-11 and similar type; Loader: 120,000 lbs and above; Excavator: over 130,000 lbs and above

GROUP 3: HYDRAULIC CRANE: Hydraulic crane operator, 50 tons through 89 tons (without luffing or tower attachment); LATTICE BOOM CRANES: Lattice Boom Crane-50 through 89 tons (and less than 150 feet boom); Bulldozer: over 70,000 lbs up to and including 120,000; Loader: 60,000 lbs and less than 120,000 lbs; Excavator: over 80,000 lbs through 130,000 lbs

GROUP 4: CRANE: Hydraulic Crane Operator, under 50 tons; LATTICE BOOM CRANE OPERATOR: Lattice Boom Crane Operator, under 50 tons; TRACKHOE/BACKHOE-ROBOTIC: up to and including 20,000 lbs. with any or all attachments; BLADE: Blade operator; Tractor operator with boom attachment; DRILLING: Churm Drill and Earth Boring Machine Operator; Directional Drill Operator over 20,000 lbs pullback; CRANE: Chicago boom and similar types; Boom type lifting device, 5



ton capacity or less; Asphalt Paver; Mechanic; Bulldozer: over 20,000 lbs and more than 100 horse and up to 70,000 lbs; Loader: 25,000 lbs and less than 60,000 lbs; Screed; Excavator: over 20,000 lbs through 80,000 lbs.

GROUP 5: TRACKHOE/BACKHOE-HYDRAULIC: up to and including 20,000 lbs.; Open wheeled type; DRILLING: Churm Drill and Earth Boring Machine Operator; Directional Drill Operator less than 20,000 lbs pullback; Concrete Pumper; Concrete Paver; forklift over 5 ton; Bulldozer: 20,000 lbs or less, or 100 horse or less; Loader: rubber tired type, less than 25,000 lbs; Roller

GROUP 6: LOADERS: (less than 1 cu yd.); Oiler; Crane oiler; forklift; Broom; Roller (Non-Asphalt)

Zone Differential (add to Zone 1 rates):

Zone 2 - \$3.00

Zone 3 - \$6.00

For the following metropolitan counties: MULTNOMAH; CLACKAMAS; MARION; WASHINGTON; YAMHILL; AND COLUMBIA; CLARK; AND COWLITZ COUNTY, WASHINGTON WITH MODIFICATIONS AS INDICATED:

All jobs or projects located in Multnomah, Clackamas and Marion Counties, West of the western boundary of Mt. Hood National Forest and West of Mile Post 30 on Interstate 84 and West of Mile Post 30 on State Highway 26 and West of Mile Post 30 on Highway 22 and all jobs or projects located in Yamhill County, Washington County and Columbia County and all jobs or projects located in Clark & Cowlitz County, Washington except that portion of Cowlitz County in the Mt. St. Helens "Blast Zone" shall receive Zone I pay for all classifications.

All jobs or projects located in the area outside the identified boundary above, but less than 50 miles from the Portland City Hall shall receive Zone II pay for all classifications.

All jobs or projects located more than 50 miles from the Portland City Hall, but outside the identified border above, shall receive Zone III pay for all classifications.

For the following cities: ALBANY; BEND; COOS BAY; EUGENE; GRANTS PASS; KLAMATH FALLS; MEDFORD; ROSEBURG

All jobs or projects located within 30 miles of the respective city hall of the above mentioned cities shall receive Zone I pay for all classifications.

All jobs or projects located more than 30 miles and less than 50 miles from the respective city hall of the above mentioned cities shall receive Zone II pay for all classifications.

All jobs or projects located more than 50 miles from the respective city hall of the above mentioned cities shall receive Zone III pay for all classifications.

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IRON0029-013 07/01/2018

Rates

Fringes

IRONWORKER (Reinforcing and Structural).....\$ 37.00 27.87

LAB00737-005 06/01/2018

Rates Fringes

Laborers: (Mason Tender-Cement/Concrete).....\$ 29.70 13.82

LAB00737-006 06/01/2018

Rates Fringes

Laborers: (Mason Tender-Brick)....\$ 29.70 13.82

LAB00737-022 06/01/2018

Rates Fringes

Laborers:

GROUP 1.....\$ 29.70 13.82

GROUP 2.....\$ 30.81 13.82

GROUP 3.....\$ 25.77 13.82

#### LABORER CLASSIFICATIONS

GROUP 1: Form-Stripping

GROUP 4: Grade Checker, Pipelayer

GROUP 5: Flagger

PAIN0055-020 07/01/2018

Rates Fringes

Painters:

Brush, Roller and Spray.....\$ 22.51 11.94

PAIN0055-023 07/01/2018

Rates Fringes

DRYWALL FINISHER/TAPER.....\$ 36.98 15.44

PLAS0555-006 06/01/2018

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...\$ 34.93 18.17

PLUM0290-014 04/01/2017

CROOK, GILLIAM, HARNEY (those portions which lies north and west of a north-south line drawn from the town of John Day to a point five miles east of the town of Burns and three miles south of Burns thence on an airline through the town of Wagontire west to the County lines), JEFFERSON COUNTIES

Rates Fringes

Plumbers and Pipefitters.....	\$ 43.82	28.28
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 \* PLUM0296-007 04/01/2018

HARNEY (Remainder of County)

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 30.50	14.57

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 SHEE0016-001 07/01/2018

HARNEY County

	Rates	Fringes
Sheet Metal Worker Excluding Metal Roof.....	\$ 27.88	17.90

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 SHEE0016-016 07/01/2018

	Rates	Fringes
Sheet Metal Worker Excluding Metal Roof.....	\$ 39.57	19.70

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 TEAM0037-008 06/01/2017

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 27.94	14.37
GROUP 2.....	\$ 28.06	14.37
GROUP 3.....	\$ 28.19	14.37
GROUP 4.....	\$ 28.46	14.37
GROUP 5.....	\$ 28.68	14.37
GROUP 6.....	\$ 28.85	14.37
GROUP 7.....	\$ 29.05	14.37

#### TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Dump trucks, side, end and bottom dumps: up to and including 10 cu. yds.

GROUP 2: Dump trucks/articulated dumps 6 cu to 10 cu.;

GROUP 3: Dump trucks, side, end and bottom dumps: over 10 cu. yds. and including 30 cu. yds., includes articulated dump trucks

GROUP 4: Dump trucks, side, end and bottom dumps: over 30 cu. yds. and including 50 cu. yds. and includes articulated dump trucks

GROUP 5: Dump trucks, side, end and bottom dumps: over 50 cu. yds. and including 60 cu. yds. and includes articulated dump trucks

GROUP 6: Dump trucks, side, end and bottom dumps: over 60 cu. yds. and including 80 cu. yds. and includes articulated dump trucks

GROUP 7: Dump trucks, side, end and bottom dumps: over 80 cu. yds. and including 100 cu. yds., includes articulated dump trucks

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 SUOR2009-047 11/09/2009

	Rates	Fringes
LABORER: Common or General.....	\$ 20.21	5.83
SHEET METAL WORKER (Metal Roofs Installation).....	\$ 23.65	6.33
SPRINKLER FITTER (Fire Sprinklers).....	\$ 25.00	8.29

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WELDERS - Receive rate prescribed for craft performing  
 operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198

indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour

Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

**ATTACHMENT “J”**

**OREGON BOLI WAGE DECISIONS FOR REGION 10**

**See following pages**

REGION #10  
Crook, Deschutes and Jefferson Counties

Using the booklet, [Definitions of Covered Occupations](#), find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	See Appendix	See Appendix
Boilermaker	\$37.31	\$22.73
Bricklayer/Stonemason	\$34.93	\$17.21
Bridge and Highway Carpenter (See Carpenter Group 5)	See Appendix	See Appendix
Carpenter Group 1 & 2	\$31.51	\$12.63
Cement Mason	\$28.77	\$14.17
Diver	See Appendix	See Appendix
Diver Tender	See Appendix	See Appendix
Dredger	See Appendix	See Appendix
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	\$34.31	\$15.27
Drywall Taper	\$32.24	\$13.19
Electrician	See Appendix	See Appendix
Elevator Constructor, Installer and Mechanic	See Appendix	See Appendix
Fence Constructor (Non-metal)	\$25.07	\$10.33
Fence Erector (Metal)	\$20.50	\$5.09
Flagger	\$21.03	\$10.45
Glazier	\$35.65	\$17.38
Hazardous Materials Handler/Mechanic	\$20.92	\$9.12
Highway and Parking Striper	\$26.11	\$8.20
Ironworker	See Appendix	See Appendix
Laborer Group 1	\$24.25	\$10.01
Laborer Group 2	\$26.56	\$11.43
Laborer Group 3	\$22.22	\$12.73
Landscape Laborer/Technician	\$18.54	\$4.82
Limited Energy Electrician	\$30.03	\$10.49
Line Constructor	See Appendix	See Appendix
Marble Setter	\$34.28	\$19.08
Millwright Group 1 & 2	\$29.32	\$10.68
Painter	\$22.00	\$8.46
Piledriver (See Carpenter Group 6)	See Appendix	See Appendix
Plasterer and Stucco Mason	\$23.81	\$18.19
Plumber/Pipefitter/Steamfitter	See Appendix	See Appendix
Power Equipment Operator Group 1	See Appendix	See Appendix
Power Equipment Operator Group 1A	See Appendix	See Appendix
Power Equipment Operator Group 1B	See Appendix	See Appendix
Power Equipment Operator Group 2	See Appendix	See Appendix
Power Equipment Operator Group 3	See Appendix	See Appendix
Power Equipment Operator Group 4	See Appendix	See Appendix
Power Equipment Operator Group 5	See Appendix	See Appendix
Power Equipment Operator Group 6	See Appendix	See Appendix



REGION #10  
Crook, Deschutes and Jefferson Counties

Using the booklet, [Definitions of Covered Occupations](#), find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	\$26.17	\$11.17
Sheet Metal Worker	See Appendix	See Appendix
Soft Floor Layer	\$25.02	\$11.16
Sprinkler Fitter	See Appendix	See Appendix
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	See Appendix	See Appendix
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	\$34.14	\$13.04
Tilesetter/Terrazzo Worker: Hard Tilesetter	\$29.85	\$17.65
Tile, Terrazzo, and Marble Finisher	See Appendix	See Appendix
Truck Driver – All Groups	\$22.25	\$6.74



**ATTACHMENT “K”**  
**INADVERTENT DISCOVERY PLAN**

**City of Prineville**  
**Inadvertent Discovery Plan January 2019**

**1. General**

A. The following Inadvertent Discovery Plan (IDP) is to be implemented by the City of Prineville (City), and followed by any contractor or subcontractor working for or on behalf of the City, to expeditiously address the inadvertent discoveries during ground disturbing activities for the City involving the City of Prineville Senior Center Rehabilitation Project. This IDP terminates when the project reaches substantial completion.

B. This IDP is to ensure all parties involved are contacted and fulfill their obligations under the following state and federal laws:

1. Archaeological Objects and sites [ORS 358.905-358.955]
2. Indian Graves and Protected Objects [ORS 97-740-97.760]
3. National Historic Preservation Act [16 USC 470 [36 CFR Part 60]
4. Native American Graves Protection and Repatriation Act [25 USC 3001] [43 CFR Part 10]

C. The laws recognize and codify the tribes' rights in the decision-making process regarding ancestral remains and associated objects. Therefore, both the discovery ancestral remains and/or archaeological objects should be treated in a sensitive and respectful manner by all parties involved.

D. In accordance with these laws, if previously unidentified archaeological materials or sites are discovered during ground disturbing activities, the following shall occur:

1. The project in the immediate vicinity of the inadvertent discovery will stop.
2. City staff shall be notified by telephone at (541) 447-5627 of the inadvertent discovery and the City staff shall, in turn, notify a professional archaeologist of the inadvertent discovery.
3. A buffer zone of thirty (30) meters shall be established around the site, unless otherwise advised by the archaeologist; and the City shall take reasonable measures to protect the site.
4. The City will notify the following of the inadvertent discovery by telephone, facsimile, and/or email within 48 hours of the discovery, or at the soonest possible time: the State Historic Preservation Office (SHPO; telephone or facsimile only); and the Confederated Tribes of Warm Springs (the Tribe).
5. If human remains are discovered, the City will cease all activity which will cause further disturbance to the remains. The City will notify the Oregon State Police, the SHPO, the Commission on Indian Services, the Tribe, and the Crook County Sheriff to ensure that the human remains are cared for, that relevant parties agree upon a

course of action, and that project activities can recommence while not causing unreasonable harm to the discovered burial area.

6. If ground disturbing activities are necessary to determine significance, site boundaries, and/or National Register eligibility, an expedited archaeological permit will be applied for by the consulting archaeologist and received from the SHPO prior to commencing with any ground disturbance.
7. Expedited review to prevent an undue threat to the site shall be undertaken in accordance with state law. The SHPO and the Tribe will attempt to respond within forty-eight (48) hours of notification (excluding Saturdays, Sundays, and any legal or tribal holidays). The City shall not proceed with any ground disturbing activities until concurrence is received from the SHPO, and any other consulting agencies identified as needing review by Oregon state law. The City will consider recommendations for the discovery resources and carry out appropriate actions.
8. The consulting archaeologist shall make a preliminary assessment of National Register eligibility of the discovery resource(s) and propose actions to resolve any potential adverse effects at the soonest possible time. The findings will be sent to the State Historic Preservation Office whenever an archaeological site is found whether human remains are discovered or not. SHPO must concur on all eligibility decisions before project activities can commence.
9. All inadvertent discoveries must be documented, as appropriate, regarding state historical preservation laws. This may include archaeological site forms submitted to the SHPO, cultural resource evaluation reports, findings of effect, and testing and mitigation reports. All data recovery plans should be coordinated through the Oregon SHPO. If found eligible for the National Register, the site should be avoided, if possible. If not, it will need to be mitigated to minimize impacts.
10. Depending on the project, the nature of discovery and the statutory jurisdiction, the SHPO may ask the City to retain a consulting archaeologist to assist in the development of a Treatment Plan. The appropriate jurisdictional agency may need to get involved in discussions to resolve the matter in accordance with the respective authorities.
11. The City may conclude this procedure and notify consulting parties, as appropriate, if the disturbance of the historic property or property of traditional religious and cultural importance is minimal so as to have no effect on the historic property and the excavation or disturbance can be relocated to avoid the property, as determined with the SHPO and the Tribe. Concurrence from the SHPO and the Tribe is required prior to commencement of any further ground disturbing activities.
12. Documentation of all reports and associated compliance should be kept in the City project files.

E. The intent of the IDP is to have a process in place to expeditiously deal with such discoveries. Management of archaeological sites should be conducted in a spirit of stewardship for future

generations, with full recognition of their non-renewable nature and their potential multiple uses and public values.

F. This Inadvertent Discovery Plan (IDP) is to be implemented by the City of Prineville (City), and followed by any Contractor or subcontractor working for or on behalf of the City, the expeditiously address the inadvertent discoveries during ground disturbing activities for the City involving the Prineville Senior Center Rehabilitation Project.

**ATTACHMENT “L”**

**City of Prineville CDBG Contract**

**STATE OF OREGON**  
**COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM**  
**GRANT CONTRACT**

**“Prineville Senior Center Rehabilitation”**

This Contract, number C17006, dated as of the Effective Date (as defined below), is made by the State of Oregon, acting by and through its Oregon Infrastructure Finance Authority of the Oregon Business Development Department (“OBDD”), and the City of Prineville, Oregon (“Recipient”).

The parties agree as follows:

**SECTION 1 - CONTRACT**

This Contract shall include the following, which are by this reference incorporated herein and which, in the event of inconsistency between any of the terms, are to be interpreted in the following order of precedence:

- A. this Contract without any Exhibits;
- B. Special Conditions of Award, attached as Exhibit A;
- C. Recipient’s Certification of Compliance with State and Federal Laws and Regulations and Certification Regarding Lobbying, attached as Exhibit B and Exhibit C, respectively;
- D. A description of the project approved by OBDD (the “Project”), attached as Exhibit D;
- E. Approved Project budget showing breakdown of sources of funds, attached as Exhibit E, which supersedes any prior drafts of the Project budget, including, but not limited to, the Project budget that is in Recipient’s application dated 29 December 2017 (“Application”); and
- F. Information Required by 2 CFR § 200.331(a)(1), attached as Exhibit F.

**SECTION 2 - GRANT**

In reliance upon Recipient’s Application and Certification of Compliance with State and Federal Laws and Regulations and Certification Regarding Lobbying as described in Exhibit B and Exhibit C, respectively, and subject to the terms and conditions of this Contract, OBDD agrees to provide Recipient funds in the amount of **\$962,271**, the use of which is expressly limited to the Project and the activities described in Exhibit D. The use of these funds is also limited to the approved Project budget in Exhibit E and subject to the Special Conditions of Award in Exhibit A.

Subject to the terms and conditions of this Contract, including but not limited to the authorization described in Section 3 below, OBDD shall disburse the grant funds to Recipient on an expense reimbursement basis after OBDD’s receipt and approval of disbursement requests from Recipient, each on a disbursement request form provided by OBDD.

**SECTION 3 - FURTHER AUTHORIZATION**

In addition to the requirement in Section 2 for Recipient to obtain OBDD’s approval for its disbursement request which shall be on the form provided by OBDD, the obligation or expenditure of funds by Recipient for the approved activities described in this Contract is prohibited without the further express written authorization of OBDD, except that such funds may be obligated or expended by Recipient for activities that are exempt as specified in 24 C.F.R. §58.34 (2003), provided that each exempt activity or project meets the conditions specified for such exemption under the cited section.



#### **SECTION 4 - PROJECT COMPLETION DATE; EFFECTIVE DATE**

- A. The approved grant activities **must be completed within 36 months** from the Effective Date ("Project Completion Date"). This Contract shall become effective on the date ("Effective Date") this Contract is fully executed and approved as required by applicable law.
- B. By the Project Completion Date, all Project activities must be completed (except for the submission of the Project completion report on a form provided by OBDD), and all disbursement requests (except disbursement requests for audit costs, if applicable) must be submitted. Unless exempt from federal audit requirements, the audit for the final fiscal year of the Project shall be submitted to the Oregon Business Development Department as soon as possible after it is received by Recipient, but in any event no later than December 31 after the Project Completion Date.

#### **SECTION 5 - RECIPIENT'S COVENANTS - COMPLIANCE WITH LAWS**

- A. Recipient agrees to comply, and cause its agents, contractors and subgrantees to comply, with all applicable state and federal laws, regulations, policies, guidelines and requirements with respect to the use of and the administration, distribution and expenditure of the funds provided under this Contract, including but not limited to the following:
  - (1) Title I of the Housing and Community Development Act of 1974, 42 U.S.C. §§5301-5321 (1994) (the "Act") and with all related applicable laws, rules and regulations, including but not limited to Sections 109 and 110 of the Act.
  - (2) Section 104(d) of the Housing and Community Development Act of 1974, as amended, 42 U.S.C. §5304(d) (1994), and the regulations promulgated pursuant thereto, and 12 U.S.C. §1735b (1994).
  - (3) Section 3 of the Housing and Urban Development Act of 1968, 12 U.S.C. §1701u (1994) (employment opportunities to lower income people in connection with assisted projects), and the regulations promulgated pursuant thereto, 24 C.F.R. §135.38 (1997). For Section 3 covered construction projects receiving more than \$200,000 under this Contract, Recipient shall cause or require the Section 3 clause in 24 C.F.R. §135.38 (1997) to be inserted in full in all contracts and subcontracts exceeding \$100,000.
  - (4) Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970, 42 U.S.C. §§4601-4655 (2005), and the regulations promulgated pursuant thereto, 49 C.F.R. §§24.1-24.603 (2005);
  - (5) Davis-Bacon Act, as amended, 40 U.S.C. §§3141 to 3144, 3146 and 3147 (2002); 42 U.S.C. §5310 (1994) (applicable to the rehabilitation of residential property by laborers and mechanics in the performance of construction work only if such property contains not less than eight (8) units); and the Contract Work Hours and Safety Standards Act, 40 U.S.C. §§327-333 (1994), and all regulations promulgated pursuant thereto and all other applicable federal laws and regulations pertaining to labor standards.
  - (6) ORS 279C.815 that in certain cases requires the higher of either the state prevailing wage rates or federal Davis-Bacon Act rates be paid to workers on projects in Oregon. Recipient will obtain applicable rates to be paid to workers and other requirements of ORS 279C.815 from the Oregon Bureau of Labor and Industries.
  - (7) Hatch Act, 5 U.S.C. §§7321-7326 (1994) (limiting the political activity of some employees).

- (8) Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d (1994), and the regulations promulgated pursuant thereto, 24 C.F.R. §§1.1-1.10 (1997). Recipient will immediately take any measures necessary to effectuate this assurance. If any real property or structure thereon is provided or improved with the aid of federal financial assistance extended to Recipient, this assurance shall obligate Recipient, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits.
  - (9) Title VIII of the Civil Rights Act of 1968, as amended, popularly known as the Fair Housing Act, 42 U.S.C. §§3601-3631 (1994), *as amended by* Pub. L. 104-76, §§1-3 109 Stat. 787 (1995); Pub. L. 104-66, Title I, §1071(e), 109 Stat. 720 (1995); Pub. L. 90-284, Title VIII, §814A, as added Pub. L. 104-208, Div. A, Title II, §2302(b)(1), 110 Stat. 3009-3421 (1996); Pub. L. 104-294, title VI, §604(b)(15), (27), 110 Stat. 3507, 3508 (1996)
  - (10) Exec. Order No. 11,063, 46 F.R. 1253 (1962), *reprinted as amended in* 42 U.S.C. §1982 (1994) and the regulations promulgated pursuant thereto, 24 C.F.R. §§107.10-107.65 (1997).
  - (11) Exec. Order No. 11,246, 30 F.R. 12319 (1965), *as amended by* Exec. Order No. 11,375, 32 F.R. 14303 (1967), *reprinted in* 42 U.S.C. §2000e (1994), and the regulations promulgated pursuant thereto, 41 C.F.R. §§60-1.1 to 60-999.1 (1997)
  - (12) Age Discrimination Act of 1975, 42 U.S.C. §§6101-6107 (1994).
  - (13) Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. 794 (1994).
  - (14) Section 302 of the Lead-Based Paint Poisoning Prevention Act, 42 U.S.C. §4822 (1994), and the regulations promulgated pursuant thereto, 24 C.F.R. §§35.1-35.98 (1997).
  - (15) Architectural Barriers Act of 1968, 42 U.S.C. §§4151-4157 (1994).
  - (16) Copeland Anti-Racketeering Act, 18 U.S.C. §1951 (1997).
  - (17) ORS §§294.305-294.565 and other applicable state laws for county and municipal administration.
  - (18) Special program and grant administration requirements imposed by OBDD related to the acceptance and use of funds provided under this Contract (which requirements have been approved in accordance with the procedures set forth in the Grant Management Handbook, and OBDD's 2017 Program Guidelines (Method of Distribution), which includes requirements regarding "Outcome Performance Measurement Reporting" by Recipient.
  - (19) Economic benefit data requested by OBDD from Recipient on the economic development benefits of the Project, from the Effective Date of this Contract until six (6) years after the Project Completion Date. Upon such request by OBDD, Recipient shall, at Recipient's expense, prepare and file the requested data within the time specified in the request. Data shall document specific requested information such as any new direct permanent or retained jobs resulting from the Project and other information to evaluate the success and economic impact of the Project.
- B. When procuring property or services to be paid for in whole or in part with Community Development Block Grant ("CDBG") funds, Recipient shall comply with the Oregon Public Contracting Code (ORS Chapters 279A, 279B, and 279C, as applicable), Chapter 137 (Divisions 046, 047, 048 and 049) of the Oregon Administrative Rules, and ORS Chapter 244, as applicable. The State of Oregon model rules for public bidding and public contract exemptions shall govern procurements under this Contract if Recipient or its public contract review board does not adopt those, or similar, rules. If Recipient or its public contract review board has adopted similar rules, those rules shall apply.

All employers, including Recipient, that employ subject workers in the State of Oregon must comply with ORS §656.017 and provide the required Worker' Compensation coverage, unless such employers are exempt under ORS §656.126. Recipient shall insure that each of its contractors and subgrantees complies with these requirements.

- C. Federal audit requirements. The grant is federal financial assistance, and the Catalog of Federal Domestic Assistance ("CFDA") number and title is "14.228 Community Development Block Grant." Recipient is a subrecipient.

(1) If Recipient receives federal funds in excess of \$750,000 in the Recipient's fiscal year, it is subject to audit conducted in accordance with the provisions of 2 C.F.R. part 200, subpart F. Recipient, if subject to this requirement, shall at its own expense submit to OBDD a copy of, or electronic link to, its annual audit subject to this requirement covering the funds expended under this Contract and shall submit or cause to be submitted to OBDD the annual audit of any subrecipient(s), contractor(s), or subcontractor(s) of Recipient responsible for the financial management of funds received under this Contract.

(2) Audit costs for audits not required in accordance with 2 C.F.R. part 200, subpart F are unallowable. If Recipient did not expend \$750,000 or more in Federal funds in its fiscal year, but contracted with a certified public accountant to perform an audit, costs for performance of that audit shall not be charged to the funds received under this Contract.

(3) Recipient shall save, protect and hold harmless OBDD from the cost of any audits or special investigations performed by the Federal awarding agency or any federal agency with respect to the funds expended under this Contract. Recipient acknowledges and agrees that any audit costs incurred by Recipient as a result of allegations of fraud, waste or abuse are ineligible for reimbursement under this or any other agreement between Recipient and the State of Oregon.

#### **SECTION 6 - OTHER COVENANTS OF RECIPIENT**

- A. The activities undertaken in this grant must meet one of three national objectives established by the U.S. Congress. Recipient covenants the activities it will undertake with the grant will meet the following national objective (check one):
- ☒ (X) (1) Activities primarily benefitting low- and moderate-income persons;  
(24 C.F.R. 570.483(b))
  - ☐ ( ) (2) Activities which aid in the prevention or elimination of slums and blight;  
(24 C.F.R. 570.483(c))
  - ☐ ( ) (3) Activities designed to meet community development needs having a particular urgency;  
(24 C.F.R. 570.483(d))
- B. No employee, agent, consultant, officer, or elected or appointed official of Recipient, or any subrecipient receiving CDBG funds who exercises or has exercised any functions or responsibilities with respect to CDBG activities assisted by the grant made pursuant to this Contract or who is in a position to participate in a decision-making process or gain inside information with regard to such activities, may obtain a financial interest or benefit from the activity, or have an interest or benefit from the activity, or have, shall have any interest, direct or indirect, in any contract, subcontract, or agreement with respect thereto, or the proceeds thereunder, for themselves or those with whom they have family or business ties, during his or her tenure or for one year thereafter.

Recipient shall also establish safeguards to prohibit employees from using their position for a purpose that is or gives the appearance of being motivated by a desire for private gain for themselves or others, particularly those with whom they have family, business, or other ties.

- C. Recipient shall incorporate, or cause to be incorporated, in all purchase orders, contracts or subcontracts regarding the procurement of property or services paid for in whole or in part with CDBG funds any clauses required by federal statutes, executive orders and implementing regulations.

Recipient shall, and shall cause all participants in lower tier covered transactions to include in any proposal submitted in connection with such transactions the certification that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation from the covered transaction.

- D. Recipient shall insert a clause in all documents prepared with the assistance of grant funds acknowledging the participation of federal and state CDBG funding.

- E. Recipient shall maintain all fiscal records relating to this Contract in accordance with generally accepted accounting principles for state and municipal corporations established by the National Committee on Governmental Accounting in a publication entitled "Governmental Accounting, Auditing and Financial Reporting (GAAFR)." In addition, Recipient shall maintain any other records pertinent to this Contract in such a manner as to clearly document Recipient's performance. For fair housing and equal opportunity purposes, and as applicable, Recipient's records shall include data on the racial, ethnic and gender characteristics of persons who are applicants for, participants in, or beneficiaries of the program. Recipient acknowledges and agrees that OBDD and the Oregon Secretary of State's Office and the federal government (including but not limited to U.S. Department of Housing and Urban Development ("HUD"), the Inspector General, and the General Accounting Office) and their duly authorized representatives shall have access to all books, accounts, records, reports, files, and other papers, or property pertaining to the administration, receipt and use of CDBG funds and necessary to facilitate such reviews and audits in order to perform examinations and audits and make excerpts and transcripts. Recipient shall retain and keep accessible all such books, accounts, records, reports, files, and other papers, or property for a minimum of three (3) years from closeout of the grant hereunder, or such longer period as may be required by applicable law, or until the conclusion of any audit, controversy or litigation arising out of or related to this Contract, whichever date is later.

Recipient shall provide citizens with reasonable access to records regarding the past use of CDBG funds consistent with state and local requirements concerning the privacy of personal records.

- F. The grant made pursuant hereto shall be conducted and administered in conformity with the Civil Rights Act of 1964, 42 U.S.C. §§2000a-2000e (1994), and the Fair Housing Act, and Recipient will affirmatively further fair housing.
- G. Recipient will not attempt to recover any capital costs of public improvements assisted in whole or part with CDBG funds by assessing any amount against properties owned and occupied by persons of low- and moderate-income, including any fee charged or assessment made as a condition of obtaining access to such public improvements, unless:
  - (1) such funds are used to pay the proportion of such fee or assessment that relates to the capital costs of such public improvements that are financed from revenue sources other than under the Act; or
  - (2) for purposes of assessing any amount against properties owned and occupied by persons of moderate income, Recipient certifies to HUD that it lacks sufficient CDBG funds to comply with the requirements of (1).

- H. Recipient will assume all of the responsibilities for environmental review, decision-making and action pursuant to the National Environmental Policy Act of 1969, 42 U.S.C. §4321-4370(d) (1994) ("NEPA"), and such other provisions of law that the applicable regulations specify that would otherwise apply to HUD federal projects, in accordance with Section 104(g) of the Act, 42 U.S.C. §5304(g) (1994). Recipient shall provide such certification as required by the Secretary of HUD. Recipients will perform reviews in accordance with 24 C.F.R. §58 (2003) and the other federal authorities listed at 24 C.F.R. §§58.5 (2003).
- I. All non-exempt Project activities must be reviewed for compliance with 36 C.F.R. §§800.1-800.15 (Protection of Historic Properties) and Exec. Order No. 11,988, 42 Fed. Reg. 26951 (1997), *reprinted as amended in* 42 U.S.C. §4321 note (1994) (Floodplain Management), and Exec. Order No. 11,990, 42 Fed. Reg. 26961 (1997), *reprinted as amended in* 42 U.S.C. §4321 note (1994) (Protection of Wetlands).
- J. Recipient has adopted and will enforce (1) a policy prohibiting the use of excessive force by law enforcement agencies within its jurisdiction against any individuals engaged in non-violent civil rights demonstrations and (2) a policy of enforcing applicable state and local laws against physically barring entrance to or exit from a facility or location which is the subject of such non-violent civil rights demonstration within its jurisdiction in accordance with Section 104(l) of the Act.
- K. Recipient shall execute, and shall cause its first tier contractors or subrecipients receiving subcontracts exceeding \$100,000 to execute and file with Recipient, the certification set forth in Exhibit C hereof.
- L. No lead-based paint will be used in residential units.
- M. Recipient shall provide to OBDD documentation of Recipient's efforts and results in meeting the performance measures contained in OBDD's 2017 Program Guidelines (Method of Distribution). Recipient's accomplishment of such performance measures or its failure to do so will be considered by OBDD when awarding future grants.

#### SECTION 7 - DETERMINATION

OBDD has made the determination that Recipient is a subrecipient, in accordance with 2 CFR §330. Recipient agrees to monitor any local government or non-profit organization subrecipient to whom it may pass funds.

#### SECTION 8 - TERMINATION

- A. OBDD reserves the right to terminate this Contract immediately upon notice to Recipient:
- (1) if Recipient fails to perform or breaches any of the terms of this Contract; or
  - (2) if Recipient is unable to commence the Project within four (4) months following the Effective Date of this Contract; or
  - (3) if OBDD, the Oregon Business Development Department or the Oregon Community Development Block Grant Program fails to receive funding, or appropriations, limitations or other expenditure authority at levels sufficient to carry out the terms of this Contract; or
  - (4) if federal or state laws, regulations or guidelines are modified or interpreted in such a way that either the grant made pursuant to the terms of this Contract or payments to be made hereunder are prohibited.

- B. OBDD may impose sanctions on Recipient for failure to comply with provisions of this Contract or OAR Chapter 123, Division 80. When sanctions are deemed necessary, OBDD may withhold unallocated funds, require return of unexpended funds, require repayment of expended funds, or cancel the Contract and recover all funds released prior to the date of notice of cancellation.

#### SECTION 9 - MISCELLANEOUS

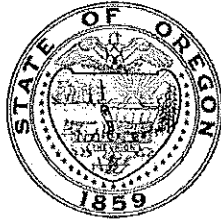
- A. OBDD's obligations are subject to receiving, **within 60 days of receipt**, this Contract, duly executed by an authorized officer of Recipient, and such certificates, documents, opinions and information that OBDD may reasonably require.
- B. OBDD and Recipient are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.
- C. Except as otherwise expressly provided in this Contract, any notices to be given hereunder shall be given in writing by personal delivery, facsimile, or mailing the same, certified or registered mail, postage prepaid, to OBDD or Recipient at the address or number set forth on the signature page of this Contract, or to such other addresses or numbers as either party may hereafter indicate pursuant to this Section 9.C. Any notice so addressed and mailed shall be deemed to be given five (5) days after mailing. Any notice delivered by facsimile shall be deemed to be given when receipt of the transmission is generated by the transmitting machine. To be effective against OBDD, such facsimile transmission must be confirmed by telephone notice to the Oregon Business Development Department at 503-986-0123. Any notice by personal delivery shall be deemed to be given when actually delivered.
- D. The laws of the State of Oregon (without giving effect to its conflicts of law principles) govern all matters arising out of or relating to this Contract, including, without limitation, its validity, interpretation, construction, performance, and enforcement.

Any party bringing a legal action or proceeding against any other party arising out of or relating to this Contract shall bring the legal action or proceeding in the Circuit Court of the State of Oregon for Marion County (unless Oregon law requires that it be brought and conducted in another county). Each party hereby consents to the exclusive jurisdiction of such court, waives any objection to venue, and waives any claim that such forum is an inconvenient forum.

Notwithstanding the prior paragraph, if a claim must be brought in a federal forum, then it must be brought and adjudicated solely and exclusively within the United States District Court for the District of Oregon. This Section applies to a claim brought against the State of Oregon only to the extent Congress has appropriately abrogated the State of Oregon's sovereign immunity and is not consent by the State of Oregon to be sued in federal court. This Section is also not a waiver by the State of Oregon of any form of defense or immunity, including but not limited to sovereign immunity and immunity based on the Eleventh Amendment to the Constitution of the United States.

- E. This Contract and attached exhibits (which are by this reference incorporated herein) constitute the entire agreement between the parties on the subject matter hereof. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Contract. No waiver, consent, modification or change of terms of this Contract shall bind either party unless in writing and signed by both parties and all necessary state approvals have been obtained. Such waiver, consent, modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. The failure of OBDD to enforce any provision of this Contract shall not constitute a waiver by OBDD of that or any other provision.

Recipient, by the signature below of its authorized representative, acknowledges that it has read this Contract, understands it, and agrees to be bound by its terms and conditions.



**STATE OF OREGON**  
acting by and through the  
Oregon Business Development Department

775 Summer Street NE Suite 200  
Salem OR 97301-1280  
Phone 503-986-0104



**CITY OF PRINEVILLE**

387 NE 3rd Street  
Prineville OR 97754-1918  
Phone 541-447-5627

By: \_\_\_\_\_  
Chris Cummings, Assistant Director  
Economic Development

By: \_\_\_\_\_  
The Honorable Betty Roppe  
Mayor of Prineville

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**APPROVED AS TO LEGAL SUFFICIENCY IN ACCORDANCE WITH ORS 291.047:**

\_\_\_\_\_  
/s David Elott as per email dated 20 March 2018  
David Elott, Assistant Attorney General

- Exhibit A: Special Conditions of Award
- Exhibit B: Certification of Compliance
- Exhibit C: Certification Regarding Lobbying
- Exhibit D: Project Description
- Exhibit E: Project Budget
- Exhibit F: Information Required by 2 CFR § 200.331(a)(1)

**EXHIBIT A - SPECIAL CONDITIONS OF AWARD: COMMUNITY FACILITY GRANT**

Special conditions for a CDBG grant are set forth below, applicable as determined by the nature of the Project.

1. [Reserved]
2. All matching funds must be secured in writing within four (4) months following the Effective Date of this Contract or the Contract may be terminated. In any case, OBDD will not disburse CDBG funds until Recipient provides OBDD with evidence that all Project matching funds have been received by Recipient.
3. All Project-related contracts must be received by OBDD ten (10) days before they are signed. This includes all Project-related contracts between Recipient and any person or entity who will be administering the grant or performing services under a personal services contract. All Project-related bid documents must be received by OBDD at least ten (10) days before they are advertised.
4. Where the approved Project budget includes local funds and CDBG funds for a specific line item activity, those local funds must be expended before Recipient can request CDBG funds for the activity, unless otherwise authorized by OBDD.
5. Any local funds remaining in an approved non-construction budget line item when that line item activity is completed shall be transferred to the construction line item and shall be expended in accordance with paragraph 4 hereof.
6. Prior to the approval of the first drawdown of grant funds for this Project, Recipient shall provide the following to OBDD:
  - a. Copy of an adopted Fair Housing resolution and evidence that this resolution has been published within six (6) months prior to the grant drawdown.
  - b. Copy of a completed self-evaluation checklist required by Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. 794 (1994) or the Americans with Disabilities Act of 1990, 42 U.S.C. §§12111-12213 (1994).
  - c. A detailed grant administration plan, substantially in the form of Exhibit 1A in the current Grant Management Handbook, which must be approved by OBDD.
7. Prior to approval of the first disbursement of grant funds for a construction line item of this Project, Recipient shall provide the following to OBDD:
  - a. Evidence that all contractors have been informed of the applicable labor standards requirements for this Project. If the Project has a general contractor, notes or minutes of the preconstruction conference or meeting signed by the general contractor will be required. If Recipient is acting as general contractor and no preconstruction conference is held, Recipient shall submit a preconstruction checklist signed by each specialty contractor.
  - b. Notice of the Start of Construction which includes the Project name and location, date of bid opening, date of award, name of general contractor, and the number of the applicable federal Davis-Bacon wage decision included in the construction contract. If there is no general contractor, a notice shall be completed for each specialty contract.
  - c. Copies of the required certified payroll reports from the general contractor and subcontractors whose work is covered by the disbursement request on a form provided by OBDD.



8. If Recipient has received more than one CDBG grant per program year or has more than one open grant, Recipient must undertake at least one activity, in addition to adopting and publishing a Fair Housing resolution, to promote fair housing opportunities in its community.

9. a. Change of Use Requirements.

The following condition shall be in effect until five (5) years following the date of issuance by OBDD of a Certificate of Completion for this Project:

- (1) The real property or facility acquired or improved in whole or in part under this Contract shall be operated and maintained for the purposes described in Exhibit E or for other purposes which meet one of the national objectives of the Community Development Block Grant Program and which are eligible under Section 105 of the Housing and Community Development Act of 1974, as amended, 42 U.S.C. §5305 (1994).
- (2) Any change in use of the facility or disposition of property acquired or improved with CDBG funds must be made in accordance with the standards provided in 24 C.F.R. 570.489(j) (1997).
- (3) In the case where Recipient is not and will not be the owner of the real property or facility being improved with grant funds hereunder, Recipient is responsible for ensuring that the owner of the real property or facility complies with paragraphs 9.a.(1) and (2) above. As a condition of using grant funds under this Contract to improve any such real property or facility, Recipient shall cause the owner of such real property or facility to duly execute and record a trust deed against such real property in favor of Recipient, which trust deed shall be in form and substance satisfactory to OBDD.

- b. The following language must be included in any contract which transfers the property from Recipient to another party:

"It is understood and agreed that this conveyance is made and accepted, and the realty is transferred, on and subject to the covenant, condition, restriction, and reservation that the realty must continue to be used for [INSERT THE APPROVED USE OF THE PROPERTY] or for another eligible use under Title I of the Housing and Community Development Act of 1974, as amended, 42 U.S.C. §§5301-5321 (1994).

This covenant, condition, restriction, and reservation shall apply to and run with the conveyed land. If the realty is not used for the above purposes, then all the right, title, and interest in and to the described property and to the improvements on such property, shall revert to and revest in [Recipient NAME] or its successors and assigns, as fully and completely as if this instrument had not been executed.

No reversion shall render invalid or operate in any way against the lien of any mortgage or deed of trust given with respect to the conveyed realty in good faith, and for value; and on any such reversion [Recipient NAME] shall take title to the conveyed realty subject to any such mortgage or deed of trust. Provided, however, that should any such mortgage or deed of trust be foreclosed, then the title acquired by such foreclosure, and the person or persons who thereby and thereafter become the owner or owners of the conveyed realty, shall be subject to and bound by all the restrictions contained in this instrument; and further provided, that [Recipient NAME] may enforce any covenant, condition, and restriction by any other appropriate action at its sole option."

- c. The following language must be included in any deed that transfers the property from Recipient to another party:

“This deed is subject to all covenants, restrictions, and agreements of record that are made a part of this deed by reference, including the [INSERT NAME OF DOCUMENT OF SALE OR TRANSFER] which by this reference is incorporated herein, as though such covenants, restrictions, and agreements were fully set forth in this deed. Should any mortgage or deed of trust be foreclosed on the property to which this instrument refers, then the title acquired by such foreclosure, and the person or persons who thereby and thereafter become the owner or owners of such property, shall be subject to and bound by all the restrictions, conditions, and covenants set forth in this instrument.”

10. Recipient shall obtain as-built drawings for buildings that will be available for use by the public.
11. Recipient shall collect and maintain documentation satisfactory to OBDD that the community facility meets the national objective of principal benefit to low- and moderate-income persons. Such documentation shall be:
- a. Evidence that shows that the primary use of the facility is by persons who are presumed under HUD regulations for the Community Development Block Grant Program to be principally low and moderate income (e.g., elderly or handicapped persons, abused children, battered spouses, homeless persons, illiterate persons or migrant farm workers), or
  - b. Data showing the size and annual income of the immediate family of each person benefitting from the facility so that it is evident that at least 51 percent of the clientele are low and moderate income, or
  - c. Income eligibility requirements which limit the benefits of the facility exclusively to low- and moderate-income persons, or
  - d. Evidence that the benefits of the facility are available to ALL the residents in a particular area and that at least 51 percent of those residents are low and moderate income.

**EXHIBIT B - RECIPIENT'S CERTIFICATION OF COMPLIANCE  
WITH STATE AND FEDERAL LAWS AND REGULATIONS**

Funds for the Oregon Community Development Block Grant Program are provided through a grant to OBDD from the U.S. Department of Housing and Urban Development, under Title I of the Housing and Community Development Act of 1974, as amended, 42 U.S.C. §5301 (1994). These funds are subject to various federal statutes and regulations as well as state laws and administrative rules.

Recipient hereby represents, warrants and certifies that:

1. it has complied with all relevant federal and state statutes, regulations, executive orders, policies, guidelines and requirements with respect to the application for and acceptance and use of Oregon Community Development Block Grant funds, including but not limited to the Act;
2. it possesses legal authority to apply for and accept the terms and conditions of the Grant and to carry out the proposed Project;
3. its governing body has duly authorized the filing of the application, including all understandings and assurances contained therein;
4. the person identified as the official representative of Recipient in the application and the Contract is duly authorized to act in connection therewith and to provide such additional information as may be required. Recipient's official representative has sufficient authority to make all certifications on its behalf;
5. the Contract does not and will not violate any provision of any applicable law, rule, regulation or order of any court, regulatory commission, board or administrative agency applicable to Recipient or any provision of Recipient's organic laws or documents; and
6. the Contract has been duly executed by Recipient's highest elected official and delivered by Recipient and will constitute the legal, valid and binding obligations of Recipient, enforceable in accordance with their terms.

Recipient further represents, warrants and certifies that it is following a detailed citizen participation plan which:

1. provides for and encourages citizen participation, with particular emphasis on participation by persons of low and moderate income who are residents of slum and blighted areas and of areas in which funds are proposed to be used;
2. provides citizens with reasonable and timely access to local meetings, information, and records relating to Recipient's proposed use of funds, as required by applicable regulations, and relating to the actual use of funds under the Act;
3. furnishes citizens information concerning the amount of funds available in the current fiscal year and the range of activities that may be undertaken, including the estimated amount proposed to be used for activities that will benefit persons of low and moderate income, and the proposed activities likely to result in displacement and the plans of Recipient for minimizing displacement of persons as a result of activities assisted with such funds and for relocating persons actually displaced as a result of such activities;
4. provides for technical assistance to groups representative of persons of low and moderate income that request such assistance in developing proposals, with the level and type of assistance to be determined by Recipient;

5. provides for a minimum of two public hearings to obtain citizen views and to respond to proposals and questions at all stages of the community development program, including at least the development of needs, the review of proposed activities, and review of program performance, which hearings shall be held after reasonable notice, at times and locations convenient to potential or actual beneficiaries, and with accommodation for the handicapped;
6. identifies how the needs of non-English speaking residents will be met in the case of public hearings where a significant number of non-English speaking residents can be reasonably expected to participate;
7. provides reasonable advance notice of and opportunity to comment on proposed activities in a grant application to OBDD or as to grants already made substantial changes from Recipient's application to OBDD to activities; and
8. provides the address, phone number and times for submitting complaints and grievances and provides for a timely written answer to written complaints and grievances, within 15 working days where practicable.

Recipient represents, warrants and certifies that:

1. it has complied with its obligations as described in Section 6.F of this Contract; and
2. it is following the State of Oregon Residential Antidisplacement and Relocation Assistance Plan unless it adopts and makes public its own plan which complies with 24 C.F.R. 42.325 (1997). Recipient also certifies that it will minimize the displacement of persons as a result of activities assisted with Oregon CDBG funds.

Recipient further represents, warrants and certifies that:

1. the grant will be conducted and administered in conformity with the Civil Rights Act of 1964, 42 U.S.C. §§2000a-2000e (1994), and the Fair Housing Act, and Recipient will affirmatively further fair housing; and
2. no lead-based paint will be used in residential units.

Recipient further represents, warrants and certifies that:

1. it has carried out its responsibilities as described in Section 6.H of the Contract;
2. the officer executing this certification is its chief executive officer (or other designated officer of Recipient who is qualified under the applicable HUD regulations);
3. such certifying officer consents to assume the status of a responsible federal official under NEPA and other laws specified by the applicable HUD regulations, 24 C.F.R. §§58.1-58.77 (2003); and
4. such certifying officer is authorized and consents on behalf of Recipient and himself/herself to accept the jurisdiction of the federal courts for the purpose of enforcement of his/her responsibility as such an official.

City of Prineville

Signed

\_\_\_\_\_

Title

\_\_\_\_\_

Date

\_\_\_\_\_

**EXHIBIT C - CERTIFICATION REGARDING LOBBYING (CDBG Awards exceeding \$100,000)**

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

City of Prineville

Signed

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Title

---

Date

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**EXHIBIT D - PROJECT DESCRIPTION**

The Recipient shall complete design and construction of a rehabilitation on the existing Prineville Senior Center. Rehabilitation activities include but are not limited to construction of a new roof, replacement of interior flooring, installation of new kitchen appliances and a reconstruction of the parking lot.

**EXHIBIT E - PROJECT BUDGET**

	OBDD Funds	Other / Matching Funds
Activity	Approved Budget	Approved Budget
Engineering	72,541	\$0
Architectural	87,050	0
Construction	649,734	9,732
Construction Contingency	65,946	0
Labor Standards Compliance	20,000	0
Grant Administration 17430	35,000	0
Legal	12,000	0
Environmental Review	20,000	0
Total	\$962,271	\$9,732

**EXHIBIT F - INFORMATION REQUIRED BY 2 CFR § 200.331(A)(1)**

Federal Award Identification:

- (i) Subrecipient\* name (which must match registered name in DUNS): PRINEVILLE, CITY OF
- (ii) Subrecipient's DUNS number: 08-661-3296
- (iii) Federal Award Identification Number (FAIN): B-17-DC-41-0001
- (iv) Federal Award Date: 5 Oct 2017
- (v) Sub-award Period of Performance Start and End Date: 36 months from Contract execution
- (vi) Total Amount of Federal Funds Obligated by this Contract: \$962,271
- (vii) Total Amount of Federal Funds Obligated by this initial Contract and any amendments: \$962,271
- (viii) Total Amount of Federal Award to the pass-through entity: \$11,978,330
- (ix) Federal award project description: The FFY 2017 State Community Development Block Grant Program funds will be awarded through a competitive application process to rural communities in Oregon for the following project types: Public Works Projects, Community Facilities, Owner-occupied Housing Rehabilitation and Microenterprise Assistance. CDBG projects will meet the national objective of benefitting low- and moderate-income persons or an urgent need.
- (x) Name of Federal awarding agency, pass-through entity, and contact information for awarding official of the Pass-through entity:
  - (a) Name of Federal awarding agency: U.S. Department of Housing and Urban Development
  - (b) Name of pass-through entity: Oregon Business Development Department
  - (c) Contact information for awarding official of the pass-through entity: Ed Tabor, Programs & Incentives Manager, 503-949-3523
- (xi) CFDA Number and Name: 14.228 Community Development Block Grant  
Amount: \$962,271
- (xii) Is Award R&D? No
- (xiii) Indirect cost rate for the Federal award: N/A

\*For the purposes of this Exhibit F, "Subrecipient" refers to Recipient and "pass-through entity" refers to OBDD.





## SECTION 01 1000 - SUMMARY

### PART 1 GENERAL

#### 1.1. PROJECT

- A. Project Name: Prineville Senior Center Rehabilitation
- B. The Project consists of the alteration of of the Prineville Senior Center. .

#### 1.2. CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Contract Documents Attachment "A".

#### 1.3. DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is indicated on drawings and specified in Section 02 4100.
- B. Scope of alterations work is indicated on drawings.
- C. Owner will remove the following items before start of work:
  - 1. Furniture, chairs, tables, pool table, etc. and store in the Soroptimist Room until flooring is installed. Contractor coordinate relocation for ceiling work..
- D. Contractor shall remove and store the following prior to start of work, for later reinstallation by Contractor:
  - 1. All kitchen equipment required to be moved, stored, and reconnected after scope of work completed..

#### 1.4. OWNER OCCUPANCY

- A. Owner intends to continue to occupy portions of the existing building during the entire construction period. Soroptimist Room will be used as office and storage space.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.
- D. **Kitchen: Owner would like to gain access to kitchen and freezer/cooler to store food and prepare meals as soon as possible. Kitchen area would need to be functional, accessible from exterior, etc. for meal delivery.**

#### 1.5. CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings.
  - 1. Locate and conduct construction activities in ways that will limit disturbance to site.
- B. Arrange use of site and premises to allow:
  - 1. Owner occupancy.
- C. Provide access to and from site as required by law and by Owner:

1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
  2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Time Restrictions:
1. Limit conduct of especially noisy exterior work to City of Prineville noise ordinance requirements.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

## **SECTION 01 2000 - PRICE AND PAYMENT PROCEDURES**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Procedures for preparation and submittal of application for final payment.

#### **1.2. SCHEDULE OF VALUES**

- A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
- B. Forms filled out by hand will not be accepted.
- C. Submit Schedule of Values within 7 days after date of Owner-Contractor Agreement.
- D. Revise schedule to list approved Change Orders, with each Application For Payment.

#### **1.3. APPLICATIONS FOR PROGRESS PAYMENTS**

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
- C. Forms filled out by hand will not be accepted.
- D. For each item, provide a column for listing each of the following:
  - 1. Item Number.
  - 2. Description of work.
  - 3. Scheduled Values.
  - 4. Previous Applications.
  - 5. Work in Place and Stored Materials under this Application.
  - 6. Authorized Change Orders.
  - 7. Total Completed and Stored to Date of Application.
  - 8. Percentage of Completion.
  - 9. Balance to Finish.
  - 10. Retainage.
- E. Execute certification by signature of authorized officer.
- F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- H. Submit one electronic of each Application for Payment.
- I. Include the following with the application:
  - 1. Transmittal letter as specified for submittals in Section 01 3000.
  - 2. Partial release of liens from major subcontractors and vendors.
  - 3. Affidavits attesting to off-site stored products.

- J. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

#### **1.4. MODIFICATION PROCEDURES**

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
  - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
  - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 5 Working days.
- D. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation.
- E. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
- F. Substantiation of Costs: Provide full information required for evaluation.
  - 1. On request, provide the following data:
    - a. Quantities of products, labor, and equipment.
    - b. Taxes, insurance, and bonds.
    - c. Overhead and profit.
    - d. Justification for any change in Contract Time.
    - e. Credit for deletions from Contract, similarly documented.
- G. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- H. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- I. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- J. Promptly enter changes in Project Record Documents.

**1.5. APPLICATION FOR FINAL PAYMENT**

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

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**



## **SECTION 01 2300 - ALTERNATES**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Description of Alternates.

#### **1.2. RELATED REQUIREMENTS**

- A. General Instructions to Bidders (Section 3): Instructions for preparation of pricing for Alternates.
- B. Construction Contract between City of Prineville and General Contractor (Attachement A): Incorporating monetary value of accepted Alternates.

#### **1.3. ACCEPTANCE OF ALTERNATES**

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Alternates will not be selected in a particular order. Accepted Alternates will be decided based on ability to stay within budget. Accepted Alternates will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

#### **1.4. SCHEDULE OF ALTERNATES**

- A. Alternate No. 1 - Remove and Replace Kitchen Oven:
- B. Alternate No. 2 - Demolition and Removal of all asphalt paving and concrete flatwork areas including parking lots, alley, concrete sidewalks per Construction Documents.:
  - 1. Alternate Item: Section [02 4100].
- C. Alternate No. 3 - Removal of existing rolled carpet in office / reception area. Provide and install specified carpet tiles.:
  - 1. Alternate Item: Section [09 6813].
- D. Alternate No. 4 - Removal of existing rolled carpet in office / reception area. Provide and install specified LVT planks:
  - 1. Alternate Item: Section [09 6433].
- E. Alternate No. 5 - Remove existing fluorescent light ballasts and associated parts. Replace with LED ballasts and associated parts.:
- F. Alternate No. 6 - Remove and Replace 1" insulated glazing panels and storefront assembly at NE corner of building:
  - 1. Alternate Item: Sections [08 8000] and 08 4313.
- G. Alternate No. 7 - Remove existing storefront vestibule door and assembly. Install new automatic sliding door assembly. Patch and Repair all adjacent surfaces to complete the work:
  - 1. Alternate Item: Section [08 4229].
- H. Alternate No. 8 - Paint interior columns an accent color different than walls.:

1. Alternate Item: Section [09 9123].
- I. Alternate No. 9 - Remove and Replace Walk-in Cooler mechanical system:
- J. Alternate No. 10 - Contech Drainage Pipe System:
  1. Alternate Item: Section [33 4211.1].

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**



## **SECTION 01 2500 - SUBSTITUTION PROCEDURES**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Procedural requirements for proposed substitutions.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 2300 - Alternates, for product alternatives affecting this section.
- B. Section 01 3000 - Administrative Requirements: Submittal procedures, coordination.
- C. Section 01 6000 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

### **PART 2 PRODUCTS - NOT USED**

### **PART 3 EXECUTION**

#### **3.1. GENERAL REQUIREMENTS**

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
  - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
  - 2. Agrees to provide the same warranty for the substitution as for the specified product.
  - 3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
  - 4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
  - 5. Waives claims for additional costs or time extension that may subsequently become apparent.
  - 6. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
  - 1. Forms included in the Project Manual are adequate for this purpose, and must be used.
- D. Limit each request to a single proposed substitution item.
  - 1. Submit an electronic document, combining the request form with supporting data into single document.

### **3.2. SUBSTITUTION PROCEDURES DURING PROCUREMENT**

- A. Submittal Form (before award of contract):
  - 1. Submit substitution requests by completing the form attached to this section. See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- B. Owner will consider requests for substitutions only if submitted at least 10 days prior to the date for receipt of bids.

### **3.3. SUBSTITUTION PROCEDURES DURING CONSTRUCTION**

- A. Submittal Form (after award of contract):
  - 1. Submit substitution requests by completing the form attached to this section. See this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.
  - 2. Refer to Section B.18 Construction Contract- Attachement "A"
- B. Submit request for Substitution for Cause immediately upon discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
- C. Submit request for Substitution for Convenience immediately upon discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
  - 1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.
  - 2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
  - 3. Bear the costs engendered by proposed substitution of:
    - a. Owner's compensation to the Architect for any required redesign, time spent processing and evaluating the request.
- D. Substitutions will not be considered under one or more of the following circumstances:
  - 1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
  - 2. Without a separate written request.

### **3.4. RESOLUTION**

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect will notify Contractor in writing of decision to accept or reject request.
  - 1. Architect's decision following review of proposed substitution will be noted on the submitted form.

### **3.5. ACCEPTANCE**

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

### **3.6. CLOSEOUT ACTIVITIES**

- A. See Section 01 7800 - Closeout Submittals, for closeout submittals.
- B. Include completed Substitution Request Forms as part of the Project record. Include both approved and rejected Requests.

### **3.7. ATTACHMENTS**

- A. A facsimile of the Substitution Request Form (During Construction) required to be used on the Project is included after this section.

**END OF SECTION**



# SUBSTITUTION REQUEST FORM

# CSI

Advancement of  
Construction Technology  
The Construction Specifications Institute  
Northwest Region

TO:

PROJECT:

SPECIFIED ITEM:

Section	Page	Paragraph	Description
---------	------	-----------	-------------

The undersigned requests consideration of the following

PROPOSED  
SUBSTITUTION:

Attached data includes 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 the construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service 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 3000 - ADMINISTRATIVE REQUIREMENTS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. General administrative requirements.
- B. Preconstruction meeting.
- C. Site mobilization meeting.
- D. Progress meetings.
- E. Construction progress schedule.
- F. Contractor's daily reports.
- G. Coordination drawings.
- H. Submittals for review, information, and project closeout.
- I. Number of copies of submittals.
- J. Requests for Interpretation (RFI) procedures.
- K. Submittal procedures.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 6000 - Product Requirements: General product requirements.
- B. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements.
- C. Section 01 7800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

#### **1.3. GENERAL ADMINISTRATIVE REQUIREMENTS**

- A. Comply with requirements of Section 01 7000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to Architect:
  - 1. Requests for Interpretation (RFI).
  - 2. Requests for substitution.
  - 3. Shop drawings, product data, and samples.
  - 4. Test and inspection reports.
  - 5. Design data.
  - 6. Manufacturer's instructions and field reports.
  - 7. Applications for payment and change order requests.
  - 8. Progress schedules.
  - 9. Coordination drawings.
  - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
  - 11. Closeout submittals.

## **PART 2 PRODUCTS - NOT USED**

## **PART 3 EXECUTION**

### **3.1. PRECONSTRUCTION MEETING**

- A. Owner will schedule a meeting after Notice of Award.
- B. Attendance Required:
  - 1. Owner.
  - 2. Architect.
  - 3. Contractor.
  - 4. Major Sub-Contractors.
  - 5. Civil Engineer.
  - 6. Structural Engineer, if applicable.
- C. Agenda:
  - 1. Execution of Owner-Contractor Agreement.
  - 2. Submission of executed bonds and insurance certificates.
  - 3. Distribution of Contract Documents.
  - 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
  - 5. Designation of personnel representing the parties to Contract, Owner and Architect.
  - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
  - 7. Scheduling.
  - 8. Use of premises by Owner and Contractor.
  - 9. Owner's requirements.
  - 10. Construction facilities and controls provided by Owner.
  - 11. Temporary utilities provided by Owner.
  - 12. Security and housekeeping procedures.
  - 13. Schedules.
  - 14. Application for payment procedures.
  - 15. Procedures for testing.
  - 16. Procedures for maintaining record documents.
  - 17. Requirements for start-up of equipment.
  - 18. Inspection and acceptance of equipment put into service during construction period.
  - 19. Prevailing wage compliance and monitoring.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### **3.2. PROGRESS MEETINGS**

- A. Schedule and administer meetings throughout progress of the work at maximum weekly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.



- C. Attendance Required:
  - 1. Contractor.
  - 2. Owner.
  - 3. Architect.
  - 4. Contractor's superintendent.
  - 5. Major subcontractors.
- D. Agenda:
  - 1. Review minutes of previous meetings.
  - 2. Review of work progress.
  - 3. Field observations, problems, and decisions.
  - 4. Identification of problems that impede, or will impede, planned progress.
  - 5. Review of submittals schedule and status of submittals.
  - 6. Maintenance of progress schedule.
  - 7. Corrective measures to regain projected schedules.
  - 8. Planned progress during succeeding work period.
  - 9. Maintenance of quality and work standards.
  - 10. Effect of proposed changes on progress schedule and coordination.
  - 11. Other business relating to work.
  - 12. Prevailing wage compliance and monitoring.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### **3.3. CONSTRUCTION PROGRESS SCHEDULE**

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
- B. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
  - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- C. Within 10 days after joint review, submit complete schedule.
- D. Submit updated schedule every 30 days.

### **3.4. COORDINATION DRAWINGS**

### **3.5. REQUESTS FOR INTERPRETATION (RFI)**

- A. Definition: A request seeking one of the following:
  - 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in the Contract Documents.

- B. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of the Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
  - 1. Prepare a separate RFI for each specific item.
    - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
    - b. Do not forward requests which solely require internal coordination between subcontractors.
  - 2. Prepare in a format and with content acceptable to Owner.
  - 3. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- C. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
  - 1. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
  - 2. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, the Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
    - a. The Owner reserves the right to assess the Contractor for the costs (on time-and-materials basis) incurred by the Architect, and any of its consultants, due to processing of such RFIs.
- D. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
  - 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
  - 2. Owner's, Architect's, and Contractor's names.
  - 3. Discrete and consecutive RFI number, and descriptive subject/title.
  - 4. Issue date, and requested reply date.
  - 5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
  - 6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
  - 7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- E. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- F. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
  - 1. Indicate current status of every RFI. Update log promptly and on a regular basis.
  - 2. Note dates of when each request is made, and when a response is received.
  - 3. Highlight items requiring priority or expedited response.

4. Highlight items for which a timely response has not been received to date.
- G. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
  1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- H. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
  1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
  2. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

### **3.6. SUBMITTAL SCHEDULE**

- A. Submit to Architect for review a schedule for submittals in tabular format.
  1. Coordinate with Contractor's construction schedule and schedule of values.

### **3.7. SUBMITTALS FOR REVIEW**

- A. When the following are specified in individual sections, submit them for review:
  1. Product data.
  2. Shop drawings.
  3. Samples for selection.
  4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

### **3.8. SUBMITTALS FOR INFORMATION**

- A. When the following are specified in individual sections, submit them for information:
  1. Design data.
  2. Certificates.
  3. Test reports.
  4. Inspection reports.
  5. Manufacturer's instructions.
  6. Manufacturer's field reports.
  7. Other types indicated.

- B. Submit for Architect's knowledge as contract administrator or for Owner.

### **3.9. SUBMITTALS FOR PROJECT CLOSEOUT**

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
  - 1. Project record documents.
  - 2. Operation and maintenance data.
  - 3. Warranties.
  - 4. Bonds.
  - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

### **3.10. NUMBER OF COPIES OF SUBMITTALS**

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
  - 1. After review, produce duplicates.
  - 2. Retained samples will not be returned to Contractor unless specifically so stated.

### **3.11. SUBMITTAL PROCEDURES**

- A. General Requirements:
  - 1. Use a separate transmittal for each item.
  - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
  - 3. Transmit using approved form.
    - a. Use Contractor's form, subject to prior approval by Architect.
  - 4. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
  - 5. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
  - 6. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
    - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
  - 7. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
    - a. Send submittals in electronic format via email to Architect.

8. Schedule submittals to expedite the Project, and coordinate submission of related items.
    - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
    - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
    - c. For sequential reviews involving approval from authorities having jurisdiction (AHJ), in addition to Architect's approval, allow an additional 30 days.
  9. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
  10. Provide space for Contractor and Architect review stamps.
  11. When revised for resubmission, identify all changes made since previous submission.
  12. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
  13. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
  14. Submittals not requested will not be recognized or processed.
- B. Product Data Procedures:
1. Submit only information required by individual specification sections.
  2. Collect required information into a single submittal.
  3. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related work.
  2. Do not reproduce the Contract Documents to create shop drawings.
  3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
- D. Samples Procedures:
1. Transmit related items together as single package.
  2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.

### **3.12. SUBMITTAL REVIEW**

- A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
- D. Architect's and consultants' actions on items submitted for review:
  1. Authorizing purchasing, fabrication, delivery, and installation:
    - a. "Approved", or language with same legal meaning.
    - b. "Approved as Noted, Resubmission not required", or language with same legal meaning.

- 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
  - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
    - 1) Resubmit corrected item, with review notations acknowledged and incorporated. Resubmit separately, or as part of project record documents.
- 2. Not Authorizing fabrication, delivery, and installation:
  - a. "Revise and Resubmit".
    - 1) Resubmit revised item, with review notations acknowledged and incorporated.
  - b. "Rejected".
    - 1) Submit item complying with requirements of Contract Documents.
- E. Architect's and consultants' actions on items submitted for information:
  - 1. Items for which no action was taken:
    - a. "Received" - to notify the Contractor that the submittal has been received for record only.
  - 2. Items for which action was taken:
    - a. "Reviewed" - no further action is required from Contractor.

**END OF SECTION**

## **SECTION 01 4000 - QUALITY REQUIREMENTS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Submittals.
- B. Quality assurance.
- C. References and standards.
- D. Testing and inspection agencies and services.
- E. Control of installation.
- F. Mock-ups.
- G. Tolerances.
- H. Manufacturers' field services.
- I. Defect Assessment.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 3000 - Administrative Requirements: Submittal procedures.
- B. Section 01 6000 - Product Requirements: Requirements for material and product quality.

#### **1.3. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the contract documents, or for Owner's information.
  - 1. Include required product data and shop drawings.
  - 2. Include a statement or certification attesting that design data complies with criteria indicated, such as building codes, loads, functional, and similar engineering requirements.
  - 3. Include signature and seal of design professional responsible for allocated design services on calculations and drawings.
- C. Test Reports: After each test/inspection, promptly submit one electronic copies of report to Architect and to Contractor.
  - 1. Include:
    - a. Date issued.
    - b. Project title and number.
    - c. Name of inspector.
    - d. Date and time of sampling or inspection.
    - e. Identification of product and specifications section.
    - f. Location in the Project.
    - g. Type of test/inspection.
    - h. Date of test/inspection.
    - i. Results of test/inspection.

- j. Compliance with Contract Documents.
  - k. When requested by Architect, provide interpretation of results.
- 2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the contract documents, or for Owner's information.
- D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
  - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- F. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
  - 1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the contract documents.
- G. Erection Drawings: Submit drawings for Architect's benefit as contract administrator or for Owner.
  - 1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the contract documents.

#### **1.4. QUALITY ASSURANCE**

- A. Testing Agency Qualifications:
- B. Designer Qualifications: Where professional engineering design services and design data submittals are specifically required of Contractor by Contract Documents, provide services of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

#### **1.5. REFERENCES AND STANDARDS**

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.



- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

#### **1.6. TESTING AND INSPECTION AGENCIES AND SERVICES**

- A. Owner will employ and pay for services of an independent testing agency to perform other specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

### **PART 2 PRODUCTS - NOT USED**

### **PART 3 EXECUTION**

#### **3.1. CONTROL OF INSTALLATION**

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

#### **3.2. MOCK-UPS**

- A. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.
- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mock-ups shall be a comparison standard for the remaining Work.
- D. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Architect.

### **3.3. TOLERANCES**

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

### **3.4. TESTING AND INSPECTION**

- A. Testing Agency Duties:
  - 1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
  - 2. Perform specified sampling and testing of products in accordance with specified standards.
  - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
  - 4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
  - 5. Perform additional tests and inspections required by Architect.
  - 6. Submit reports of all tests/inspections specified.
- B. Limits on Testing/Inspection Agency Authority:
  - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
  - 2. Agency may not approve or accept any portion of the Work.
  - 3. Agency may not assume any duties of Contractor.
  - 4. Agency has no authority to stop the Work.
- C. Contractor Responsibilities:
  - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
  - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
  - 3. Provide incidental labor and facilities:
    - a. To provide access to Work to be tested/inspected.
    - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
    - c. To facilitate tests/inspections.
    - d. To provide storage and curing of test samples.
  - 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
  - 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
  - 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

- D. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- E. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

### **3.5. MANUFACTURERS' FIELD SERVICES**

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment, and \_\_\_\_\_ as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

### **3.6. DEFECT ASSESSMENT**

- A. Replace Work or portions of the Work not complying with specified requirements.

**END OF SECTION**



## **SECTION 01 5000 - TEMPORARY FACILITIES AND CONTROLS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Temporary utilities.
- B. Temporary telecommunications services.
- C. Temporary sanitary facilities.
- D. Temporary Controls: Barriers, enclosures, and fencing.
- E. Security requirements.
- F. Vehicular access and parking.
- G. Waste removal facilities and services.
- H. Field offices.

#### **1.2. TEMPORARY UTILITIES**

- A. Contractor to pay for all electrical power, lighting, water, heating and cooling, and ventilation required during construction period. Owner will provide contractor with monthly billing for the duration of the construction period.
- B. Existing facilities may be used at Contractor's Expense.
- C. Use trigger-operated nozzles for water hoses, to avoid waste of water.

#### **1.3. TELECOMMUNICATIONS SERVICES**

- A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.

#### **1.4. TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Use of one existing facilities located at Prineville Senior Center is permitted.
- C. Maintain daily in clean and sanitary condition.
- D. At end of construction, return facilities to same or better condition as originally found.

#### **1.5. BARRIERS**

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Provide protection for plants designated to remain. Replace damaged plants.

- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

#### **1.6. FENCING**

- A. Provide 6 foot (1.8 m) high fence around construction site; equip with vehicular and pedestrian gates with locks.

#### **1.7. EXTERIOR ENCLOSURES**

- A. Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

#### **1.8. INTERIOR ENCLOSURES**

- A. Provide temporary partitions and ceilings as indicated to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas, and to prevent damage to existing materials and equipment.
- B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:

#### **1.9. SECURITY**

- A. Coordinate with Owner's security program.

#### **1.10. VEHICULAR ACCESS AND PARKING**

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Coordinate access and haul routes with governing authorities and Owner.
- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

#### **1.11. WASTE REMOVAL**

- A. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.
  - 1. Section C.6 SALVAGING AND RECYCLING - City of Prineville Construction Contract.
- B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- C. Provide containers with lids. Remove trash from site periodically.

- D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

#### **1.12. FIELD OFFICES**

- A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture.
- B. Provide space for Project meetings, with table and chairs to accommodate 6 persons. Maybe provided inside building with owner approval.
- C. Locate offices a minimum distance of 30 feet (10 m) from existing and new structures.

#### **1.13. REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS**

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet (600 mm). Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition.

#### **PART 2 PRODUCTS - NOT USED**

#### **PART 3 EXECUTION - NOT USED**

#### **END OF SECTION**





## **SECTION 01 5713 - TEMPORARY EROSION AND SEDIMENT CONTROL**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Prevention of erosion due to construction activities.
- B. Prevention of sedimentation of waterways, open drainage ways, and storm and sanitary sewers due to construction activities.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 31 1000 - Site Clearing: Limits on clearing; disposition of vegetative clearing debris.
- B. Section 31 2200 - Grading: Temporary and permanent grade changes for erosion control.
- C. Section 32 1123 - Aggregate Base Courses: Temporary and permanent roadways.

#### **1.3. REFERENCE STANDARDS**

- A. ASTM D4355/D4355M - Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc Type Apparatus; 2014.
- B. ASTM D4751 - Standard Test Method for Determining Apparent Opening Size of a Geotextile; 2016.
- C. ASTM D4873/D4873M - Standard Guide for Identification, Storage, and Handling of Geosynthetic Rolls and Samples; 2017.
- D. EPA (NPDES) - National Pollutant Discharge Elimination System (NPDES), Construction General Permit; Current Edition.
- E. FHWA FLP-94-005 - Best Management Practices for Erosion and Sediment Control; 1995.
- F. USDA TR-55 - Urban Hydrology for Small Watersheds; USDA Natural Resources Conservation Service; 2013.

#### **1.4. PERFORMANCE REQUIREMENTS**

- A. Comply with requirements of EPA (NPDES) for erosion and sedimentation control, as specified by the NPDES, for Phases I and II, and in compliance with requirements of Construction General Permit (CGP), whether the project is required by law to comply or not.
- B. Also comply with all more stringent requirements of City of Prineville Erosion and Sedimentation Control Manual.
- C. Develop and follow an Erosion and Sedimentation Prevention Plan and submit periodic inspection reports.
- D. Do not begin clearing, grading, or other work involving disturbance of ground surface cover until applicable permits have been obtained; furnish all documentation required to obtain applicable permits.
  - 1. Owner will obtain permits and pay for securities required by authority having jurisdiction.

- E. Timing: Put preventive measures in place as soon as possible after disturbance of surface cover and before precipitation occurs.
- F. Storm Water Runoff: Control increased storm water runoff due to disturbance of surface cover due to construction activities for this project.
  - 1. Prevent runoff into storm and sanitary sewer systems, including open drainage channels, in excess of actual capacity or amount allowed by authorities having jurisdiction, whichever is less.
  - 2. Anticipate runoff volume due to the most extreme short term and 24-hour rainfall events that might occur in 25 years.
- G. Erosion On Site: Minimize wind, water, and vehicular erosion of soil on project site due to construction activities for this project.
  - 1. Control movement of sediment and soil from temporary stockpiles of soil.
  - 2. Prevent development of ruts due to equipment and vehicular traffic.
  - 3. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to Owner.
- H. Erosion Off Site: Prevent erosion of soil and deposition of sediment on other properties caused by water leaving the project site due to construction activities for this project.
  - 1. Prevent windblown soil from leaving the project site.
  - 2. Prevent tracking of mud onto public roads outside site.
  - 3. Prevent mud and sediment from flowing onto sidewalks and pavements.
  - 4. If erosion occurs due to non-compliance with these requirements, restore eroded areas at no cost to Owner.
- I. Open Water: Prevent standing water that could become stagnant.
- J. Maintenance: Maintain temporary preventive measures until permanent measures have been established.

## **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Certificate: Mill certificate for silt fence fabric attesting that fabric and factory seams comply with specified requirements, signed by legally authorized official of manufacturer; indicate actual minimum average roll values; identify fabric by roll identification numbers.
- C. Inspection Reports: Submit report of each inspection; identify each preventive measure, indicate condition, and specify maintenance or repair required and accomplished.

## **PART 2 PRODUCTS**

### **2.1. MATERIALS**

- A. Silt Fence Fabric: Synthetic thermal plastic woven geotextile resistant to common soil chemicals, mildew, and insects; non-biodegradable; in longest lengths possible; fabric including seams with the following minimum average roll lengths:
  - 1. Average Opening Size: 70-100 U.S. Std. Sieve (212-150 mm), maximum, when tested in accordance with ASTM D4751.
  - 2. Water Flow Rate: 275 gallons/minute/square feet minimum.

3. Ultraviolet Resistance: Retaining at least 70 percent of tensile strength, when tested in accordance with ASTM D4355/D4355M after 500 hours exposure.
  4. Mullen burst strength: 120 pound per square inch minimum; when tested in accordance with ASTM D3786.
- B. Silt Fence Posts: One of the following, minimum 18 inches on center, maximum 6 feet on center:
1. Steel U- or T-section, with minimum mass of 1.33 pound per linear foot (1.98 kg per linear m).
  2. Softwood, 4 by 4 inches (100 by 100 mm) in cross section.
  3. Hardwood, 2 by 2 inches (50 by 50 mm) in cross section.

## **PART 3 EXECUTION**

### **3.1. PREPARATION**

- A. Schedule work so that soil surfaces are left exposed for the minimum amount of time.

### **3.2. SCOPE OF PREVENTIVE MEASURES**

- A. In all cases, if permanent erosion resistant measures have been installed temporary preventive measures are not required.
- B. Construction Entrances: Existing driveway along E. First Street.
1. Where necessary to prevent tracking of mud onto right-of-way, provide wheel washing area out of direct traffic lane, with drain into sediment trap or basin.
- C. Linear Sediment Barriers: Made of silt fences.
1. Provide linear sediment barriers:
    - a. Along edge of existing on-site drainage swale and the perimeter edge of soil stockpiles.
- D. Soil Stockpiles: Protect using one of the following measures:
1. Cover with polyethylene film, secured by placing soil on outer edges.

### **3.3. INSTALLATION**

- A. Silt Fences:
1. Store and handle fabric in accordance with ASTM D4873/D4873M.
  2. Bury bottom of filter fabric 6" vertically below finished grade.
  3. Stitched loops to be installed downhill side of slope.
  4. Compact all areas of filter fabric trench.
  5. Maximum recommended fence width is 500 feet. Maximum tributary area is 0.25 acre per 100' of fence.
  6. The filter fabric shall be purchased in a continuous roll cut to the length of barrier to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6-inch overlap, and both ends securely fastened to the post, or overlap 2"x2" posts and attach as shown on detail included in Construction Drawings.

7. Standard or heavy duty filter fabric fence shall have manufactured stitched loops for 2" x 2" post installation. Stitched loops shall be installed on the uphill side of the looped area.

#### **3.4. MAINTENANCE**

- A. Inspect preventive measures daily, within 8 hours after the end of any storm that produces 0.5 inches (13 mm) or more rainfall at the project site, and daily during prolonged rainfall.
- B. Repair deficiencies immediately.
- C. Silt Fences:
  1. Promptly replace fabric that deteriorates unless need for fence has passed.
  2. Remove silt deposits that exceed one-third of the height of the fence.
  3. Repair fences that are undercut by runoff or otherwise damaged, whether by runoff or other causes.
- D. Clean out temporary sediment control structures weekly and relocate soil on site.
- E. Place sediment in appropriate locations on site; do not remove from site.

#### **3.5. CLEAN UP**

- A. Remove temporary measures after permanent measures have been installed, unless permitted to remain by Architect.
- B. Where removal of temporary measures would leave exposed soil, shape surface to an acceptable grade and finish to match adjacent ground surfaces.

#### **END OF SECTION**

## **SECTION 01 6116 - VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Requirements for Indoor-Emissions-Restricted products.
- B. Requirements for VOC-Content-Restricted products.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 3000 - Administrative Requirements: Submittal procedures.

#### **1.3. DEFINITIONS**

- A. Indoor-Emissions-Restricted Products: All products in the following product categories, whether specified or not:
  - 1. Interior paints and coatings applied on site.
  - 2. Interior adhesives and sealants applied on site, including flooring adhesives.
  - 3. Flooring.
  - 4. Products making up wall and ceiling assemblies.
  - 5. Thermal and acoustical insulation.
- B. VOC-Content-Restricted Products: All products in the following product categories, whether specified or not:
  - 1. Interior paints and coatings applied on site.
  - 2. Interior adhesives and sealants applied on site, including flooring adhesives.
- C. Interior of Building: Anywhere inside the exterior weather barrier.
- D. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.
- E. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.
- F. Inherently Non-Emitting Materials: Products composed wholly of minerals or metals, unless they include organic-based surface coatings, binders, or sealants; and specifically the following:
  - 1. Concrete.
  - 2. Clay brick.
  - 3. Metals that are plated, anodized, or powder-coated.
  - 4. Glass.
  - 5. Ceramics.
  - 6. Solid wood flooring that is unfinished and untreated.

#### **1.4. REFERENCE STANDARDS**

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

- B. ASTM D3960 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings; 2005 (Reapproved 2013).
- C. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board; 2007.
- D. SCAQMD 1113 - Architectural Coatings; 1977 (Amended 2016).
- E. SCAQMD 1168 - Adhesive and Sealant Applications; 1989 (Amended 2017).

#### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.

#### **1.6. QUALITY ASSURANCE**

- A. VOC Content Test Method: 40 CFR 59, Subpart D (EPA Method 24), or ASTM D3960, unless otherwise indicated.
  - 1. Evidence of Compliance: Acceptable types of evidence are:
    - a. Report of laboratory testing performed in accordance with requirements.
- B. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

### **PART 2 PRODUCTS**

#### **2.1. MATERIALS**

- A. VOC-Content-Restricted Products: VOC content not greater than required by the following:
  - 1. Adhesives, Including Flooring Adhesives: SCAQMD 1168 Rule.
  - 2. Joint Sealants: SCAQMD 1168 Rule.
  - 3. Paints and Coatings: Each color; most stringent of the following:
    - a. 40 CFR 59, Subpart D.
    - b. SCAQMD 1113 Rule.
    - c. CARB (SCM).

### **PART 3 EXECUTION**

#### **3.1. FIELD QUALITY CONTROL**

- A. Owner reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to Owner.

- B. Additional costs to restore indoor air quality due to installation of non-compliant products will be borne by Contractor.

**END OF SECTION**





## **SECTION 01 7000 - EXECUTION AND CLOSEOUT REQUIREMENTS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition, \_\_\_\_\_.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Cleaning and protection.
- F. Starting of systems and equipment.
- G. Demonstration and instruction of Owner personnel.
- H. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
- I. General requirements for maintenance service.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 1000 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 3000 - Administrative Requirements: Submittals procedures, Electronic document submittal service.
- C. Section 01 4000 - Quality Requirements: Testing and inspection procedures.
- D. Section 01 5000 - Temporary Facilities and Controls: Temporary interior partitions.
- E. Section 01 5713 - Temporary Erosion and Sediment Control: Additional erosion and sedimentation control requirements.
- F. Section 01 7419 - Construction Waste Management and Disposal: Additional procedures for trash/waste removal, recycling, salvage, and reuse.
- G. Section 01 7800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.
- H. Section 01 7900 - Demonstration and Training: Demonstration of products and systems to be commissioned and where indicated in specific specification sections
- I. Section 02 4100 - Demolition: Demolition of whole structures and parts thereof; site utility demolition.

#### **1.3. REFERENCE STANDARDS**

- A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
  - 1. Structural integrity of any element of Project.
  - 2. Integrity of weather exposed or moisture resistant element.
  - 3. Efficiency, maintenance, or safety of any operational element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of Owner or separate Contractor.
- C. Project Record Documents: Accurately record actual locations of capped and active utilities.

#### **1.5. QUALIFICATIONS**

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

#### **1.6. PROJECT CONDITIONS**

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- C. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- D. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
- E. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
- F. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
  - 1. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.
  - 2. Indoors: Limit conduct of especially noisy interior work to 8 am to 5 pm.
- G. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
- H. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

## **1.7. COORDINATION**

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.
- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of work of separate sections.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

## **PART 2 PRODUCTS**

### **2.1. PATCHING MATERIALS**

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

### **3.2. PREPARATION**

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

### **3.3. PREINSTALLATION MEETINGS**

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
  - 1. Review conditions of examination, preparation and installation procedures.
  - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### **3.4. LAYING OUT THE WORK**

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Architect of any discrepancies discovered.
- C. Contractor shall locate and protect survey control and reference points.
- D. Control datum for survey is that indicated on drawings.
- E. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- F. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- G. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.
- H. Utilize recognized engineering survey practices.
- I. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
  - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.

- 2. Building foundation, column locations, ground floor elevations.
- J. Periodically verify layouts by same means.
- K. Maintain a complete and accurate log of control and survey work as it progresses.

### **3.5. GENERAL INSTALLATION REQUIREMENTS**

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

### **3.6. ALTERATIONS**

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
  - 1. Verify that construction and utility arrangements are as indicated.
  - 2. Report discrepancies to Architect before disturbing existing installation.
  - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Remove existing work as indicated and as required to accomplish new work.
  - 1. Remove items indicated on drawings.
  - 2. Relocate items indicated on drawings.
  - 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
  - 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications, and \_\_\_\_\_): Remove, relocate, and extend existing systems to accommodate new construction.
  - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
  - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
  - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
    - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.

- b. Provide temporary connections as required to maintain existing systems in service.
- 4. Verify that abandoned services serve only abandoned facilities.
- 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- D. Protect existing work to remain.
  - 1. Prevent movement of structure; provide shoring and bracing if necessary.
  - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  - 3. Repair adjacent construction and finishes damaged during removal work.
- E. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
  - 1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
  - 2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
  - 3. Where a change of plane of 1/4 inch (6 mm) or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.
- F. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- G. Refinish existing surfaces as indicated:
  - 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
  - 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- H. Clean existing systems and equipment.
- I. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- J. Do not begin new construction in alterations areas before demolition is complete.
- K. Comply with all other applicable requirements of this section.

### **3.7. CUTTING AND PATCHING**

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
  - 1. Complete the work.
  - 2. Fit products together to integrate with other work.
  - 3. Provide openings for penetration of mechanical, electrical, and other services.
  - 4. Match work that has been cut to adjacent work.

5. Repair areas adjacent to cuts to required condition.
  6. Repair new work damaged by subsequent work.
  7. Remove samples of installed work for testing when requested.
  8. Remove and replace defective and non-complying work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
  - E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
  - F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
  - G. Restore work with new products in accordance with requirements of Contract Documents.
  - H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
  - I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.
  - J. Patching:
    1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
    2. Match color, texture, and appearance.
    3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

### **3.8. PROGRESS CLEANING**

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site weekly and dispose off-site; do not burn or bury.

### **3.9. PROTECTION OF INSTALLED WORK**

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

### **3.10. SYSTEM STARTUP**

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect and Owner seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable Contractor personnel in accordance with manufacturers' instructions.
- G. Submit a written report that equipment or system has been properly installed and is functioning correctly.

### **3.11. DEMONSTRATION AND INSTRUCTION**

- A. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- C. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of Owner's personnel.

### **3.12. ADJUSTING**

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

### **3.13. FINAL CLEANING**

- A. Execute final cleaning prior to final project assessment.
- B. Use cleaning materials that are nonhazardous.
- C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.



- E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- F. Clean filters of operating equipment.
- G. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, and drainage systems.
- H. Clean site; sweep paved areas, rake clean landscaped surfaces.
- I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

### **3.14. CLOSEOUT PROCEDURES**

- A. Make submittals that are required by governing or other authorities.
  - 1. Provide copies to Architect and Owner.
- B. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
- C. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
- D. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.
- E. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
- F. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
- G. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

### **3.15. MAINTENANCE**

- A. Provide service and maintenance of components indicated in specification sections.
- B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.
- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.

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

**END OF SECTION**

## **SECTION 01 7419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

### **PART 1 GENERAL**

#### **1.1. WASTE MANAGEMENT REQUIREMENTS**

- A. Owner requires that this project generate the least amount of trash and waste possible.
  - 1. Section C.6 SALVAGING AND RECYCLING - City of Prineville Construction Contract.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Methods of trash/waste disposal that are not acceptable are:
  - 1. Burning on the project site.
  - 2. Burying on the project site.
  - 3. Dumping or burying on other property, public or private.
  - 4. Other illegal dumping or burying.
- E. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 3000 - Administrative Requirements: Additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. Section 01 5000 - Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.
- C. Section 01 6000 - Product Requirements: Waste prevention requirements related to delivery, storage, and handling.
- D. Section 01 7000 - Execution and Closeout Requirements: Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

#### **1.3. DEFINITIONS**

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.

- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

### **PART 3 EXECUTION**

#### **2.1. WASTE MANAGEMENT PROCEDURES**

- A. See Section 01 3000 for additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. See Section 01 5000 for additional requirements related to trash/waste collection and removal facilities and services.
- C. See Section 01 6000 for waste prevention requirements related to delivery, storage, and handling.
- D. See Section 01 7000 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

#### **END OF SECTION**





## **SECTION 01 7800 - CLOSEOUT SUBMITTALS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 00 7200 - General Conditions and 00 7300 - Supplementary Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 01 7000 - Execution and Closeout Requirements: Contract closeout procedures.
- D. Individual Product Sections: Specific requirements for operation and maintenance data.
- E. Individual Product Sections: Warranties required for specific products or Work.

#### **1.3. SUBMITTALS**

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
  - 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
  - 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
  - 3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned, with Architect comments. Revise content of all document sets as required prior to final submission.
  - 4. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
  - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
  - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
  - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

## **PART 2 PRODUCTS - NOT USED**

## **PART 3 EXECUTION**

### **3.1. PROJECT RECORD DOCUMENTS**

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
  - 1. Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other modifications to the Contract.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
  - 1. Changes made by Addenda and modifications.
- F. Record Drawings: Legibly mark each item to record actual construction including:
  - 1. Field changes of dimension and detail.
  - 2. Details not on original Contract drawings.

### **3.2. OPERATION AND MAINTENANCE DATA**

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

### **3.3. OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES**

- A. For Each Product, Applied Material, and Finish:
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.



### **3.4. OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS**

- A. For Each Item of Equipment and Each System:
  - 1. Description of unit or system, and component parts.
  - 2. Identify function, normal operating characteristics, and limiting conditions.
  - 3. Include performance curves, with engineering data and tests.
  - 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- D. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- E. Provide servicing and lubrication schedule, and list of lubricants required.
- F. Include manufacturer's printed operation and maintenance instructions.
- G. Include sequence of operation by controls manufacturer.
- H. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- I. Include test and balancing reports.
- J. Additional Requirements: As specified in individual product specification sections.

### **3.5. ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS**

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.
- C. Binders: Commercial quality, 8-1/2 by 11 inch (216 by 280 mm) three D side ring binders with durable plastic covers; 2 inch (50 mm) maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.

- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

### **3.6. WARRANTIES AND BONDS**

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Manual: Bind in commercial quality 8-1/2 by 11 inch (216 by 279 mm) three D side ring binders with durable plastic covers.
- F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
- H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

**END OF SECTION**

## **SECTION 02 4100 - DEMOLITION**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Selective demolition of built site elements.
- B. Selective demolition of building elements for alteration purposes.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 1000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- C. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- D. Section 01 5713 - Temporary Erosion and Sediment Control.
- E. Section 01 6000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- F. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- G. Section 01 7419 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.
- H. Section 02 6500 - Underground Storage Tank Removal.
- I. Section 31 1000 - Site Clearing: Vegetation and existing debris removal.
- J. Section 31 2200 - Grading: Topsoil removal.
- K. Section 31 2323 - Fill: Fill material for filling holes, pits, and excavations generated as a result of removal operations.
- L. Section 31 2323 - Fill: Filling holes, pits, and excavations generated as a result of removal operations.

#### **1.3. REFERENCE STANDARDS**

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Site Plan: Showing:
  - 1. Areas for temporary construction and field offices.

- C. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

## **PART 2 PRODUCTS**

### **2.1. MATERIALS**

- A. Fill Material: As specified in Section 31 2200 - Grading.

## **PART 3 EXECUTION**

### **3.1. SCOPE**

- A. Remove portions of existing building per drawings and plans.
- B. Remove paving and curbs as required to accomplish new work.
- C. Remove concrete slabs on grade as indicated on drawings.
- D. Remove underground tanks.
- E. Remove other items indicated on drawings, for salvage, relocation, and recycling.

### **3.2. GENERAL PROCEDURES AND PROJECT CONDITIONS**

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
  - 1. Obtain required permits.
  - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
  - 3. Provide, erect, and maintain temporary barriers and security devices.
  - 4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
  - 5. Do not close or obstruct roadways or sidewalks without permit.
  - 6. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
  - 7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Protect existing structures and other elements that are not to be removed.
  - 1. Provide bracing and shoring.
  - 2. Prevent movement or settlement of adjacent structures.
  - 3. Stop work immediately if adjacent structures appear to be in danger.
- D. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- E. Perform demolition in a manner that maximizes salvage and recycling of materials.

1. Comply with requirements of Section 01 7419 - Waste Management.
  2. Dismantle existing construction and separate materials.
  3. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.
- F. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.
- G. Underground Storage Tanks: Remove and dispose of as specified in Section 02 6500.

### **3.3. EXISTING UTILITIES**

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

### **3.4. SELECTIVE DEMOLITION FOR ALTERATIONS**

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
  1. Verify that construction and utility arrangements are as indicated.
  2. Report discrepancies to Architect before disturbing existing installation.
  3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from other areas that are still occupied.
  1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000 in locations indicated on drawings.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- D. Remove existing work as indicated and as required to accomplish new work.
  1. Remove items indicated on drawings.
- E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
  1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.

2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
  3. Verify that abandoned services serve only abandoned facilities before removal.
  4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- F. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
  2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  3. Repair adjacent construction and finishes damaged during removal work.
  4. Patch as specified for patching new work.

### **3.5. DEBRIS AND WASTE REMOVAL**

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

### **END OF SECTION**

## **SECTION 02 6500 - UNDERGROUND STORAGE TANK REMOVAL**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Removal and disposal of underground storage tanks and connected piping.
- B. Testing soils for contamination.
- C. Providing reports required by regulatory agencies.
- D. Backfilling.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 7000 - Execution and Closeout Requirements: Dewatering of excavations and water control.
- B. Section 31 2200 - Grading: Soil removal from surface of site.
- C. Section 31 2323 - Fill: Fill materials, filling, and compacting.

#### **1.3. REFERENCE STANDARDS**

- A. API RP 1604 - Closure of Underground Petroleum Storage Tanks; 1996 (R2010).
- B. 29 CFR 1910 - Occupational Safety and Health Standards; current edition.
- C. 29 CFR 1910.38 - Emergency action plans; current edition.
- D. EPA SW-846 - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods; Current Edition.
- E. EPA 600-4-790-20 - Methods for Chemical Analysis of Water and Wastes; 1983.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Reports:
- C. Record Documents:
  - 1. Building permit, inspection permits, and other permits required for underground tank removal.
  - 2. Results of excavation, including sketch showing location of underground storage tank, sampling locations, and extent of excavation.

#### **1.5. QUALITY ASSURANCE**

- A. Perform work in accordance with local, state, and federal regulations and 40 CFR 280.
- B. Qualifications: Prior to start of work, submit documentation of recent experience and resumes of personnel working on the project.
- C. References: Furnish data proving experience on at least three prior projects that included types of activities similar to those in this project. Provide project titles, dates of projects,

owners of projects, point of contact for each project, and phone numbers of each point of contact.

## **PART 2 PRODUCTS - NOT USED**

## **PART 3 EXECUTION**

### **3.1. PREPARATION FOR TANK REMOVAL AND DISPOSAL**

- A. Personnel Protection: Furnish appropriate personal safety equipment and protective clothing to personnel.
- B. Decontamination: Decontaminate or properly dispose of personal protective equipment and clothing worn in contaminated areas at the end of the work day.
- C. First Aid And Emergency Response Equipment And Procedures: Provide appropriate emergency first aid equipment for treatment of exposure to site physical and chemical hazards.
- D. Waste Disposal: The SSHP shall detail the practices and procedures to be utilized to dispose of wastes. Upon completion of the project, certify that equipment and materials were properly decontaminated prior to being removed from the site.
- E. Emergency Response Requirements: Furnish emergency response and contingency plan in accordance with 29 CFR 1910.38.
- F. Unforeseen Hazards: Notify the Architect of any unforeseen hazard or condition that becomes evident during work.

### **3.2. EXCAVATION**

- A. Provide Architect with written documentation, no later than 30 days before work begins, that proper state or local authorities have been notified.
- B. Notify Architect at least 48 hours prior to start of tank removal work.
  - 1. Stage operations to minimize the time that tank excavation is open and the time that contaminated soil is exposed to the weather.
- C. Excavation: Excavate as required to remove tanks and piping.
  - 1. Collect and temporarily store water runoff from stockpiled soils.
- D. Excavation Methods: Select methods and equipment to remove soil to minimize disturbance to areas beyond the limits of the excavation area.
  - 1. Material that becomes contaminated as a result of Contractor's operations shall be removed and disposed of at no additional cost to Owner.
  - 2. Where excavation extends into groundwater levels, dewatering methods shall be employed on a localized basis to facilitate excavation operations, as specified in Section 01 7000.

### **3.3. TESTING**

- A. Stockpiled Soils: Soils with OVA/FID readings of 10 ppm or greater shall be further sampled and tested.
  - 1. Test for TPH and for BTEX in accordance with EPA SW-846 and EPA 600-4-790-20.



2. Test for toxicity characteristic leaching procedure (TCLP) for lead if leaded gasoline was stored in or near the underground tank being removed.
  3. For TPH, provide a minimum of one test for every 100 cubic yards (77 cubic meters).
  4. For BTEX and TCLP, provide one test for every 100 cubic yards (77 cubic meters).
  5. Soils that contain 50 ppm or more TPH, 10 ppm or more BTEX or have TCLP reading of 10 ppm lead or virgin petroleum products are considered contaminated materials.
  6. Soils that test at levels less than the above may be used as clean fill.
  7. Furnish results to Architect within 24 hours after the results are obtained.
- B. Testing Under Tank After Removal of Tank:
1. If tank is 20 feet (6 m) or less in length, take two samples. Each sample shall be 2 feet (0.60m) from each end of the tank and 2 feet (0.60 m) below the bottom of the excavation.
  2. If the tank is greater than 20 feet (6 m), take three samples. Two samples shall be 2 feet (0.60 m) from each end of the tank and 2 feet (0.60 m) below the bottom of the excavation. A third sample shall be taken from the middle of the tank area and 2 feet (0.60 m) below the bottom of the excavation.
  3. Analyze samples for TPH, BTEX, and TCLP.
  4. Comply with standards for sampling and analysis as specified above for stockpiled soils.
  5. Test for TPH and for BTEX in accordance with EPA SW-846 and EPA 600-4-790-20.
  6. Soils that contain 50 ppm or more TPH, 10 ppm or more BTEX, or have TCLP reading of 10 ppm of lead or virgin petroleum products are considered contaminated materials.
  7. Soils that test at levels less than the above may be used as clean fill.
  8. Furnish results to Architect within 24 hours after the results are obtained.

### **3.4. DISPOSAL OF UNDERGROUND TANKS AND ASSOCIATED PIPING**

- A. Preparation: API RP 1604. Remove the fill pipe, gage pipe, vapor recovery truck connection, submersible pumps, and drop tube.
1. Cap or remove non-product piping, except vent piping.
  2. Plug tank openings so that vapors will exit through vent piping during the vapor-freeing process.
- B. Purging: Remove flammable vapors in accordance with API RP 1604. Tanks shall be certified as "vapor free" prior to further work.
- C. Cleaning and Testing: Clean tank and perform atmosphere testing in accordance with API RP 1604.
1. Distribution (product delivery) piping shall be cleaned and removed or the piping shall be cleaned, filled with concrete, and abandoned in place.
  2. Test the tank atmosphere and the excavation area for flammable or combustible vapor concentrations, with a combustible gas indicator until the tank is removed from the excavation and from the site.
- D. Tank Removal and Disposal:
1. Plug or cap accessible holes. One plug shall have a minimum 1/8 inch (3 mm) vent hole.
  2. Remove tank from the excavation, place it on a level surface and render it useless in accordance with API RP 1604.

3. Provide warning labels on tank if tank contained leaded fuels, as follows:
  - a. "TANK HAS CONTAINED LEADED GASOLINE -- NOT VAPOR FREE -- NOT SUITABLE FOR STORAGE OF FOOD OR LIQUIDS INTENDED FOR HUMAN OR ANIMAL CONSUMPTION -- DATE OF REMOVAL: MONTH/DAY/YEAR"
4. Transport and dispose of tank at an EPA approved disposal site in accordance with federal, state, and local regulations.

### **3.5. BACKFILLING**

- A. Provide backfill, compaction, grading, and seeding in accordance with 31 2323.

**END OF SECTION**

## **SECTION 03 3000 - CAST-IN-PLACE CONCRETE**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Concrete formwork.
- B. Floors and slabs on grade.
- C. Concrete foundation walls.
- D. Concrete reinforcement.
- E. Joint devices associated with concrete work.
- F. Concrete curing.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 07 9200 - Joint Sealants: Products and installation for sealants and joint fillers for saw cut joints and isolation joints in slabs.
- B. Section 32 1313 - Concrete Paving: Sidewalks, curbs and gutters.

#### **1.3. REFERENCE STANDARDS**

- A. ACI 117 - Standard Specifications for Tolerances for Concrete Construction and Materials; 2010 (Reapproved 2015).
- B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; 1991 (Reapproved 2009).
- C. ACI 301 - Specifications for Structural Concrete; 2016.
- D. ACI 302.1R - Guide to Concrete Floor and Slab Construction; 2015.
- E. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
- F. ACI 305R - Guide to Hot Weather Concreting; 2010.
- G. ACI 306R - Guide to Cold Weather Concreting; 2016.
- H. ACI 308R - Guide to External Curing of Concrete; 2016.
- I. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2018).
- J. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2018, with Editorial Revision (2018).
- K. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2018.
- L. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2012.
- M. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2016, with Editorial Revision (2016).

- N. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2018.
- O. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2017a.
- P. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2015a.
- Q. ASTM C150/C150M - Standard Specification for Portland Cement; 2018.
- R. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2016.
- S. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a (Reapproved 2016).
- T. ASTM C330/C330M - Standard Specification for Lightweight Aggregates for Structural Concrete; 2017a.
- U. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2017.
- V. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2015.
- W. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2014a.
- X. ASTM C1116/C1116M - Standard Specification for Fiber-Reinforced Concrete; 2010a (Reapproved 2015).
- Y. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures; 2015.
- Z. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair; 2013.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
- C. Mix Design: Submit proposed concrete mix design.
  - 1. Indicate proposed mix design complies with requirements of ACI 301, Section 4 - Concrete Mixtures.
  - 2. Indicate proposed mix design complies with fiber reinforcing manufacturer's written recommendations.
- D. Test Reports: Submit report for each test or series of tests specified.
- E. Sustainable Design Submittal: If any fly ash, ground granulated blast furnace slag, silica fume, rice hull ash, or other waste material is used in mix designs to replace Portland cement, submit the total volume of concrete cast in place, mix design(s) used showing the quantity of portland cement replaced, reports showing successful cylinder testing, and temperature on day of pour if cold weather mix is used.

#### **1.5. QUALITY ASSURANCE**

- A. Perform work of this section in accordance with ACI 301 and ACI 318.
- B. Follow recommendations of ACI 306R when concreting during cold weather.

## **1.6. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

## **PART 2 PRODUCTS**

### **2.1. FORMWORK**

- A. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
  - 1. Form Facing for Exposed Finish Concrete: Contractor's choice of materials that will provide smooth, stain-free final appearance.
  - 2. Form Coating: Release agent that will not adversely affect concrete or interfere with application of coatings.
  - 3. Form Ties: type that will leave no metal within 1-1/2 inches (38 mm) of concrete surface.

### **2.2. REINFORCEMENT MATERIALS**

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi) (420 MPa).
  - 1. Type: Deformed billet-steel bars.
  - 2. Finish: Unfinished, unless otherwise indicated.
- B. Steel Welded Wire Reinforcement (WWR): Galvanized, plain type, ASTM A1064/A1064M.
  - 1. Form: Coiled Rolls.
  - 2. WWR Style: As indicated on drawings.
- C. Reinforcement Accessories:
  - 1. Tie Wire: Annealed, minimum 16 gage, 0.0508 inch (1.29 mm).
  - 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.
  - 3. Provide stainless steel, galvanized, plastic, or plastic coated steel components for placement within 1-1/2 inches (38 mm) of weathering surfaces.

### **2.3. CONCRETE MATERIALS**

- A. Cement: ASTM C150/C150M, Type I - Normal Portland type.
  - 1. Acquire cement for entire project from same source.
- B. Fine and Coarse Aggregates: ASTM C33/C33M.
  - 1. Acquire aggregates for entire project from same source.
- C. Lightweight Aggregate: ASTM C330/C330M.
- D. Fly Ash: ASTM C618, Class C or F.
- E. Calcined Pozzolan: ASTM C618, Class N.
- F. Silica Fume: ASTM C1240, proportioned in accordance with ACI 211.1.
- G. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.
- H. Structural Fiber Reinforcement: ASTM C1116/C1116M. As allowed per structural drawings.

#### **2.4. ADMIXTURES**

- A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.
- B. Air Entrainment Admixture: ASTM C260/C260M.
- C. High Range Water Reducing and Retarding Admixture: ASTM C494/C494M Type G.
- D. High Range Water Reducing Admixture: ASTM C494/C494M Type F.
- E. Water Reducing and Accelerating Admixture: ASTM C494/C494M Type E.
- F. Water Reducing and Retarding Admixture: ASTM C494/C494M Type D.
- G. Accelerating Admixture: ASTM C494/C494M Type C.
- H. Retarding Admixture: ASTM C494/C494M Type B.
- I. Water Reducing Admixture: ASTM C494/C494M Type A.
- J. Shrinkage Reducing Admixture:

#### **2.5. ACCESSORY MATERIALS**

- A. Non-Shrink Cementitious Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
  - 1. Grout: Comply with ASTM C1107/C1107M.

#### **2.6. BONDING AND JOINTING PRODUCTS**

- A. Slab Isolation Joint Filler: 1/2 inch (13 mm) thick, height equal to slab thickness, with removable top section that will form 1/2 inch (13 mm) deep sealant pocket after removal.

#### **2.7. CURING MATERIALS**

- A. Curing Compound, Naturally Dissipating: Clear, water-based, liquid membrane-forming compound; complying with ASTM C309.
- B. Curing Agent, Water-Cure Equivalent Type: Clear, water-based, non-film-forming, liquid-water cure replacement agent.
- C. Water: Potable, not detrimental to concrete.

#### **2.8. CONCRETE MIX DESIGN**

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
  - 1. Replace as much Portland cement as possible with fly ash, ground granulated blast furnace slag, silica fume, or rice hull ash as is consistent with ACI recommendations.
  - 2. Design Mix as indicated on structural drawings.
- B. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.
- C. Fiber Reinforcement: Add to mix at rate of 1.5 pounds per cubic yard (0.89 kg per cu m), or as recommended by manufacturer for specific project conditions.
- D. Normal Weight Concrete: As indicated on structural drawings.

1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 4,000 pounds per square inch (27.6 MPa).
2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
3. Water-Cement Ratio: Maximum 40 percent by weight.
4. Total Air Content: 4 percent, determined in accordance with ASTM C173/C173M.
5. Maximum Slump: 3 inches (75 mm).
6. Maximum Aggregate Size: 5/8 inch (16 mm).

## **2.9. MIXING**

- A. Transit Mixers: Comply with ASTM C94/C94M.
- B. Adding Water: If concrete arrives on-site with slump less than suitable for placement, do not add water that exceeds the maximum water-cement ratio or exceeds the maximum permissible slump.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify lines, levels, and dimensions before proceeding with work of this section.

### **3.2. PREPARATION**

- A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.
- B. Verify that forms are clean and free of rust before applying release agent.
- C. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.
- D. Prepare existing concrete surfaces to be repaired according to ICRI 310.2R, .
- E. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.
- F. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout.

### **3.3. INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS**

- A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.
- B. Install welded wire reinforcement in maximum possible lengths, and offset end laps in both directions. Splice laps with tie wire.
- C. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with concrete placement.

### **3.4. PLACING CONCRETE**

- A. Place concrete in accordance with ACI 304R.
- B. Place concrete for floor slabs in accordance with ACI 302.1R.
- C. Notify Architect not less than 24 hours prior to commencement of placement operations.
- D. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- E. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.
- F. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

### **3.5. SLAB JOINTING**

- A. Locate joints as indicated on drawings.
- B. Anchor joint fillers and devices to prevent movement during concrete placement.
- C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.
- D. Saw Cut Contraction Joints: Saw cut joints before concrete begins to cool, within 4 to 12 hours after placing; use 3/16 inch (5 mm) thick blade and cut at least 1 inch (25 mm) deep but not less than one quarter (1/4) the depth of the slab.

### **3.6. FLOOR FLATNESS AND LEVELNESS TOLERANCES**

- A. Maximum Variation of Surface Flatness:
  - 1. Exposed Concrete Floors: 1/4 inch (6 mm) in 10 feet (3 m).
- B. Correct the slab surface if tolerances are less than specified.
- C. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

### **3.7. CONCRETE FINISHING**

- A. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch (6 mm) or more in height.
- B. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch (6 mm) or more in height. Provide finish as follows:
  - 1. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal.
- C. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:
  - 1. Other Surfaces to Be Left Exposed: Trowel as described in ACI 302.1R, minimizing burnish marks and other appearance defects.



### **3.8. CURING AND PROTECTION**

- A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
- C. Surfaces Not in Contact with Forms:
  - 1. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding, water-saturated sand, water-fog spray, or saturated burlap.
  - 2. Final Curing: Begin after initial curing but before surface is dry.

### **3.9. FIELD QUALITY CONTROL**

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.
- B. Provide free access to concrete operations at project site and cooperate with appointed firm.
- C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.
- D. Tests of concrete and concrete materials may be performed at any time to ensure compliance with specified requirements.
- E. Compressive Strength Tests: ASTM C39/C39M, for each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 cubic yards (76 cu m) or less of each class of concrete placed.
- F. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
- G. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M.

### **3.10. DEFECTIVE CONCRETE**

- A. Test Results: The testing agency shall report test results in writing to Architect and Contractor within 24 hours of test.
- B. Defective Concrete: Concrete not complying with required lines, details, dimensions, tolerances or specified requirements.
- C. Repair or replacement of defective concrete will be determined by the Architect. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
- D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect for each individual area.

### **3.11. PROTECTION**

- A. Do not permit traffic over unprotected concrete floor surface until fully cured.

**END OF SECTION**

## **SECTION 03 5400 - CAST UNDERLAYMENT**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Liquid-applied self-leveling floor underlayment.
  - 1. Use cementitious type at upper and lower floors, as required..

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 7000 - Execution and Closeout Requirements: Alteration project procedures; selective demolition for remodeling.

#### **1.3. REFERENCE STANDARDS**

- A. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2016, with Editorial Revision (2016).
- B. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2016a.
- C. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2012.
- D. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2014.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2018b.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations of underlayment materials. Include information on surface preparation, environmental limitations, and installation instructions.
- C. Manufacturer's Instructions.

#### **1.5. QUALITY ASSURANCE**

- A. Applicator Qualifications: Company specializing in performing the work of this section.

#### **1.6. DELIVERY, STORAGE, AND HANDLING**

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Keep dry and protect from direct sun exposure, freezing, and ambient temperature greater than 105 degrees F (41 degrees C).

#### **1.7. FIELD CONDITIONS**

- A. Do not install underlayment until floor penetrations and peripheral work are complete.

- B. Maintain minimum ambient temperatures of 50 degrees F (10 degrees C) 24 hours before, during and 72 hours after installation of underlayment.
- C. During the curing process, ventilate spaces to remove excess moisture.

## **PART 2 PRODUCTS**

### **2.1. MANUFACTURERS**

- A. Cementitious Underlayment:
  - 1. ARDEX Engineered Cements; ARDEX K 13: [www.ardexamericas.com/#sle](http://www.ardexamericas.com/#sle).
  - 2. LATICRETE International, Inc; LATICRETE NXT Level Plus with NXT Primer: [www.laticrete.com/#sle](http://www.laticrete.com/#sle).
  - 3. Maxxon Corporation; Level-One EZ: [www.maxxon.com/#sle](http://www.maxxon.com/#sle).
  - 4. Substitutions: See Section 01 6000 - Product Requirements.

### **2.2. MATERIALS**

- A. Cast Underlayments, General:
  - 1. Comply with applicable code for combustibility or flame spread requirements.
- B. Cementitious Underlayment: Blended cement mix, that when mixed with water in accordance with manufacturer's directions will produce self-leveling underlayment with the following properties:
  - 1. Compressive Strength: Minimum 3000 pounds per square inch (\_\_\_\_ MPa) after 28 days, tested per ASTM C109/C109M.
  - 2. Flexural Strength: Minimum 1000 psi (6.9 MPa) after 28 days, tested per ASTM C348.
  - 3. Density: 125 pounds per cubic foot (2002 kg/cu m), nominal.
  - 4. Final Set Time: 1-1/2 to 2 hours, maximum.
  - 5. Thickness: Capable of thicknesses from feather edge to maximum 3-1/2 inch (89 mm).
  - 6. Surface Burning Characteristics: Flame spread/Smoke developed index of 0/0 in accordance with ASTM E84.
- C. Aggregate: Dry, well graded, washed silica aggregate, approximately 1/8 inch (3 mm) in size and acceptable to underlayment manufacturer.
- D. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to underlayment mix materials.
- E. Primer: Manufacturer's recommended type.
- F. Joint and Crack Filler: Latex based filler, as recommended by manufacturer.

### **2.3. MIXING**

- A. Site mix materials in accordance with manufacturer's instructions.
- B. Add aggregate for areas where thickness will exceed 1/2 inch (12.7 mm). Mix underlayment and water for at least two minutes before adding aggregate, and continue mixing to assure that aggregate has been thoroughly coated.
- C. Mix to self-leveling consistency without over-watering.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.

### **3.2. PREPARATION**

- A. Remove substrate surface irregularities. Fill voids and deck joints with filler. Finish smooth.
- B. Vacuum clean surfaces.
- C. Prime substrate in accordance with manufacturer's instructions. Allow to dry.
- D. Close floor openings.

### **3.3. APPLICATION**

- A. Install underlayment in accordance with manufacturer's instructions.
- B. Place to indicated thickness, with top surface level to 1/16 inch in 10 ft (1:2000).

### **3.4. CURING**

- A. Once underlayment starts to set, prohibit foot traffic until final set has been reached.
- B. Air cure in accordance with manufacturer's instructions.

### **3.5. FIELD QUALITY CONTROL**

- A. An independent testing agency will perform field inspection and testing, as specified in Section 01 4000 - Quality Requirements.

### **3.6. PROTECTION**

- A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.
- B. Do not permit traffic over unprotected floor underlayment surfaces.

### **3.7. SCHEDULES**

- A. Lower Dining Room: Provide as required to level floor and match existing ramp elevations and acceptable flooring manufacturer requirements..
- B. Upper Floor Area: Provide as required to level floor and provide surface acceptable for flooring manufacturer product.

## **END OF SECTION**



## **SECTION 05 1200 - STRUCTURAL STEEL FRAMING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Structural steel framing members.
- B. Base plates, shear stud connectors and expansion joint plates.
- C. Grouting under base plates.

#### **1.2. REFERENCE STANDARDS**

- A. AISC (MAN) - Steel Construction Manual; 2017.
- B. AISC 303 - Code of Standard Practice for Steel Buildings and Bridges; 2016.
- C. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2018.
- D. ASTM A242/A242M - Standard Specification for High-Strength Low-Alloy Structural Steel; 2013 (Reapproved 2018).
- E. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2013.
- F. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 2014.
- G. ASTM A514/A514M - Standard Specification for High-Yield-Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding; 2014.
- H. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2014a.
- I. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength, Inch and Metric Dimensions; 2015a.
- J. ASTM F436/F436M - Standard Specification for Hardened Steel Washers Inch and Metric Dimensions; 2018a.
- K. ASTM F959/F959M - Standard Specification for Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners, Inch and Metric Series; 2017a.
- L. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength; 2018.
- M. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.
- N. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).
- O. SSPC-SP 3 - Power Tool Cleaning; 1982, with Editorial Revision (2004).

#### **1.3. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings:

1. Indicate profiles, sizes, spacing, locations of structural members, openings, attachments, and fasteners.
2. Connections.
3. Indicate cambers and loads.
4. Indicate welded connections with AWS A2.4 welding symbols. Indicate net weld lengths.

#### **1.4. QUALITY ASSURANCE**

- A. Fabricate structural steel members in accordance with AISC (MAN) "Steel Construction Manual."

### **PART 2 PRODUCTS**

#### **2.1. MATERIALS**

- A. Steel Shapes, Plates, and Bars: ASTM A242/A242M high-strength, corrosion-resistant structural steel.
- B. Cold-Formed Structural Tubing: ASTM A500/A500M, Grade B.
- C. Hot-Formed Structural Tubing: ASTM A501/A501M, seamless or welded.
- D. Steel Plate: ASTM A514/A514M.
- E. Load Indicator Washers: Provide washers complying with ASTM F959/F959M at connections requiring high-strength bolts.
- F. Grout: ASTM C1107/C1107M; Non-shrink; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
  1. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch (13.7 MPa).
  2. Minimum Compressive Strength at 28 Days: 7,000 pounds per square inch (48 MPa).
- G. Shop and Touch-Up Primer: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.

#### **2.2. FABRICATION**

- A. Shop fabricate to greatest extent possible.
- B. Continuously seal joined members by continuous welds. Grind exposed welds smooth.
- C. Fabricate connections for bolt, nut, and washer connectors.

#### **2.3. FINISH**

- A. Prepare structural component surfaces in accordance with SSPC-SP 3.
- B. Shop prime structural steel members. Do not prime surfaces that will be fireproofed, field welded, in contact with concrete, or high strength bolted.



## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that conditions are appropriate for erection of structural steel and that the work may properly proceed.

### **3.2. ERECTION**

- A. Erect structural steel in compliance with AISC 303.
- B. Field weld components indicated on shop drawings.
- C. Do not field cut or alter structural members without approval of Architect.
- D. After erection, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.
- E. Grout solidly between column plates and bearing surfaces, complying with manufacturer's instructions for nonshrink grout. Trowel grouted surfaces smooth, splaying neatly to 45 degrees.

### **3.3. TOLERANCES**

- A. Maximum Variation From Plumb: 1/4 inch (6 mm) per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch (6 mm).

### **3.4. FIELD QUALITY CONTROL**

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.

**END OF SECTION**



## **SECTION 05 4000 - COLD-FORMED METAL FRAMING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Formed steel stud exterior wall framing.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 06 1000 - Rough Carpentry: Roof and wall sheathing.
- B. Section 07 2500 - Weather Barriers: Weather barrier over sheathing.
- C. Section 09 2116 - Gypsum Board Assemblies: Gypsum-based sheathing.

#### **1.3. REFERENCE STANDARDS**

- A. AISI S100-12 - North American Specification for the Design of Cold-Formed Steel Structural Members; American Iron and Steel Institute; 2012.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- D. ASTM C955 - Standard Specification for Cold-Formed Steel Structural Framing Members; 2018.
- E. ASTM C1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories; 2011a (Reapproved 2015).
- F. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2013.
- G. PS 1 - Structural Plywood; 2009.

#### **1.4. ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate with work of other sections that is to be installed in or adjacent to the metal framing system, including but not limited to structural anchors, cladding anchors, utilities, insulation, and firestopping.

#### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Manufacturer's Installation Instructions: Indicate special procedures, conditions requiring special attention, and \_\_\_\_\_.

### **PART 2 PRODUCTS**

#### **2.1. MANUFACTURERS**

- A. Metal Framing:

1. ClarkDietrich Building Systems; \_\_\_\_\_: [www.clarkdietrich.com/#sle](http://www.clarkdietrich.com/#sle).
  2. SCAFCO Corporation; \_\_\_\_\_: [www.scafco.com/#sle](http://www.scafco.com/#sle).
  3. Substitutions: See Section 01 6000 - Product Requirements.
- B. Framing Connectors and Accessories:
1. Same manufacturer as metal framing.

## 2.2. FRAMING SYSTEM

- A. Provide primary and secondary framing members, bridging, bracing, plates, gussets, clips, fittings, reinforcement, and fastenings as required to provide a complete framing system.
- B. Design Requirements: Provide completed framing system having the following characteristics:
1. Design: Calculate structural characteristics of cold-formed steel framing members according to AISI S100-12.
  2. Structural Performance: Design, engineer, fabricate, and erect to withstand specified design loads for project conditions within required limits.
  3. Design Loads: In accordance with applicable codes.
  4. Live load deflection meeting the following, unless otherwise indicated:
    - a. Exterior Walls: Maximum horizontal deflection under wind load of 1/180 of span.
    - b. Design non-axial loadbearing framing to accommodate not less than 1/2 in (13 mm) vertical deflection.
  5. Able to tolerate movement of components without damage, failure of joint seals, undue stress on fasteners, or other detrimental effects when subject to seasonal or cyclic day/night temperature ranges.
  6. Able to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.

## 2.3. FRAMING MATERIALS

- A. Studs and Track: ASTM C955; studs formed to channel, "C", or "Sigma" shape with punched web; U-shaped track in matching nominal width and compatible height.
- B. Framing Connectors: Factory-made, formed steel sheet.
1. Material: ASTM A653/A653M SS Grade 33 and 40 (minimum), with G90/Z275 hot dipped galvanized coating for base metal thickness less than 10 gage, 0.1345 inch (3.42 mm), and factory punched holes and slots.
  2. Structural Performance: Maintain load and movement capacity required by applicable code, when evaluated in accordance with AISI S100-12.
  3. Fixed Connections: Provide non-movement connections for tie-down to foundation, floor-to-floor tie-down, roof-to-wall tie-down, joist hangers, gusset plates, and stiffeners.
  4. Wall Stud Bridging Connections: Provide mechanical load-transferring devices that accommodate wind load torsion and weak axis buckling induced by axial compression loads. Provide bridging connections .

#### **2.4. FASTENERS**

- A. Self-Drilling, Self-Tapping Screws, Bolts, Nuts and Washers: Hot dip galvanized per ASTM A153/A153M.
- B. Anchorage Devices: Powder actuated.

#### **2.5. WALL SHEATHING**

- A. Plywood; PS 1, Grade C-D, Exposure I.
- B. Glass mat faced gypsum board; ASTM C1177/C1177M, square long edges, 5/8 inch (15.9 mm) thick, Type X - Fire Resistant.

#### **2.6. ACCESSORIES**

- A. Bracing, Furring, Bridging: Formed sheet steel, thickness determined for conditions encountered; finish to match framing components.
- B. Water-Resistive Barrier: As specified in Section 07 2500.

### **PART 3 EXECUTION**

#### **3.1. EXAMINATION**

- A. Verify that substrate surfaces are ready to receive work.

#### **3.2. INSTALLATION OF STUDS**

- A. Install components in accordance with manufacturers' instructions and ASTM C1007 requirements.
- B. Align floor and ceiling tracks; locate to wall layout. Secure in place with fasteners at maximum 24 inches (600 mm) on center. Coordinate installation of sealant with floor and ceiling tracks.
- C. Place studs at 16 inches (400 mm) on center; not more than 2 inches (50 mm) from abutting walls and at each side of openings. Connect studs to tracks using clip and tie method.
- D. Construct corners using minimum of three studs. Install double studs at wall openings, door and window jambs.
- E. Install load bearing studs full length in one piece. Splicing of studs is not permitted.
- F. Coordinate placement of insulation in multiple stud spaces made inaccessible after erection.
- G. Install framing between studs for attachment of mechanical and electrical items, and to prevent stud rotation.

#### **3.3. INSTALLATION OF WALL SHEATHING**

- A. Install wall sheathing with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using self-tapping screws.

1. Provide steel diagonal bracing at corners with foam insulation or gypsum board wall sheathing.
2. Place water-resistive barrier horizontally over wall sheathing, weather lapping edges and ends.

**END OF SECTION**

## **SECTION 05 5213 - PIPE AND TUBE RAILINGS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Stair railings and guardrails.
- B. Free-standing railings at steps.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 03 3000 - Cast-in-Place Concrete: Placement of anchors in concrete.
- B. Section 09 9113 - Exterior Painting: Paint finish.

#### **1.3. REFERENCE STANDARDS**

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2018.
- C. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2013.
- D. ASTM E935 - Standard Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings; 2013, with Editorial Revision.
- E. ASTM E985 - Standard Specification for Permanent Metal Railing Systems and Rails for Buildings; 2000 (Reapproved 2006).
- F. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.
- G. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 1999 (Ed. 2004).

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.
  - 1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
  - 2. Include the design engineer's seal and signature on each sheet of shop drawings.

#### **1.5. QUALITY ASSURANCE**

- A. Structural Designer Qualifications: Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located, or personnel under direct supervision of such an engineer.

## **PART 2 PRODUCTS**

### **2.1. RAILINGS - GENERAL REQUIREMENTS**

- A. Design, fabricate, and test railing assemblies in accordance with the most stringent requirements of ASTM E985 and applicable local code.
- B. Distributed Loads: Design railing assembly, wall rails, and attachments to resist distributed force of 75 pounds per linear foot (1095 N/m) applied to the top of the assembly and in any direction, without damage or permanent set. Test in accordance with ASTM E935.
- C. Concentrated Loads: Design railing assembly, wall rails, and attachments to resist a concentrated force of 200 pounds (890 N) applied at any point on the top of the assembly and in any direction, without damage or permanent set. Test in accordance with ASTM E935.
- D. Allow for expansion and contraction of members and building movement without damage to connections or members.
- E. Dimensions: See drawings for configurations and heights.
- F. Provide anchors and other components as required to attach to structure, made of same materials as railing components unless otherwise indicated; where exposed fasteners are unavoidable provide flush countersunk fasteners.
  - 1. For anchorage to concrete, provide inserts to be cast into concrete, for welding anchors.
- G. Provide welding fittings to join lengths, seal open ends, and conceal exposed mounting bolts and nuts, including but not limited to elbows, T-shapes, splice connectors, flanges, escutcheons, and wall brackets.

### **2.2. STEEL RAILING SYSTEM**

- A. Steel Tube: ASTM A500/A500M, Grade B cold-formed structural tubing.
- B. Steel Pipe: ASTM A53/A53M, Grade B Schedule 80, black finish.
- C. Welding Fittings: Factory- or shop-welded from matching pipe or tube; seams continuously welded; joints and seams ground smooth.
- D. Exposed Fasteners: No exposed bolts or screws.
- E. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

### **2.3. FABRICATION**

- A. Accurately form components to suit specific project conditions and for proper connection to building structure.
- B. Fit and shop assemble components in largest practical sizes for delivery to site.
- C. Fabricate components with joints tightly fitted and secured. Provide spigots and sleeves to accommodate site assembly and installation.
- D. Welded Joints:



1. Exterior Components: Continuously seal joined pieces by intermittent welds and plastic filler. Drill condensate drainage holes at bottom of members at locations that will not encourage water intrusion.
2. Interior Components: Continuously seal joined pieces by intermittent welds and plastic filler.
3. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that field conditions are acceptable and are ready to receive work.

### **3.2. PREPARATION**

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Supply items required to be cast into concrete or embedded in masonry with setting templates, for installation as work of other sections.
- C. Apply one coat of bituminous paint to concealed aluminum surfaces that will be in contact with cementitious or dissimilar materials.

### **3.3. INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Install components plumb and level, accurately fitted, free from distortion or defects, with tight joints.
- C. Install railings in compliance with ADA Standards for accessible design at applicable locations.
- D. Anchor railings securely to structure.
- E. Field weld anchors as indicated on drawings. Touch-up welds with primer. Grind welds smooth.

### **3.4. TOLERANCES**

- A. Maximum Variation From Plumb: 1/8 inch (3 mm) per floor level, non-cumulative.
- B. Maximum Offset From True Alignment: 1/8 inch (3 mm).
- C. Maximum Out-of-Position: 1/8 inch (3 mm).

## **END OF SECTION**



## **SECTION 06 1000 - ROUGH CARPENTRY**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Structural dimension lumber framing.
- B. Roof-mounted curbs.
- C. Roofing nailers.
- D. Roofing cant strips.
- E. Preservative treated wood materials.
- F. Concealed wood blocking, nailers, and supports.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 03 3000 - Cast-in-Place Concrete: Setting anchors in concrete.
- C. Section 07 2500 - Weather Barriers: Air barrier over sheathing.
- D. Section 07 2500 - Weather Barriers: Water-resistive barrier over sheathing.
- E. Section 07 6200 - Sheet Metal Flashing and Trim: Sill flashings.

#### **1.3. REFERENCE STANDARDS**

- A. AWC (WFCM) - Wood Frame Construction Manual for One- and Two-Family Dwellings; 2015.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- D. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2013.
- E. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2016.
- F. AWWA U1 - Use Category System: User Specification for Treated Wood; 2017.
- G. PS 1 - Structural Plywood; 2009.
- H. PS 2 - Performance Standard for Wood-Based Structural-Use Panels; 2010.
- I. PS 20 - American Softwood Lumber Standard; 2015.
- J. WCLIB (GR) - Standard Grading Rules for West Coast Lumber No. 17; 2015.
- K. WWPA G-5 - Western Lumber Grading Rules; 2017.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

### **1.5. DELIVERY, STORAGE, AND HANDLING**

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

### **1.6. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

## **PART 2 PRODUCTS**

### **2.1. GENERAL REQUIREMENTS**

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

### **2.2. DIMENSION LUMBER**

- A. Grading Agency: West Coast Lumber Inspection Bureau; WCLIB (GR).
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: Kiln-dry or MC15.
- D. Stud Framing (2 by 2 through 2 by 6 (50 by 50 mm through 50 by 150 mm) ):
  - 1. Species: Douglas Fir-Larch.
  - 2. Grade: No. 2.
- E. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16 (50 by 150 mm through 100 by 400 mm) ):
  - 1. Species: Douglas Fir-Larch.
  - 2. Grade: No. 1 & Btr.
- F. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
  - 1. Lumber: S4S, No. 2 or Standard Grade.
  - 2. Boards: Standard or No. 3.

### **2.3. STRUCTURAL COMPOSITE LUMBER**

- A. At Contractor's option, structural composite lumber may be substituted for concealed dimension lumber and timbers.
- B. Structural Composite Lumber: Factory fabricated beams, headers, and columns, of sizes and types indicated on drawings; structural capacity as published by manufacturer.

1. Beams: Use laminated veneer lumber, laminated strand lumber, or parallel strand lumber with manufacturer's published E (modulus of elasticity): 1,800,000 psi (12,410 MPa), minimum.
2. Manufacturers:
  - a. Boise Cascade Company; \_\_\_\_: [www.bc.com/#sle](http://www.bc.com/#sle).
  - b. Weyerhaeuser Company; \_\_\_\_: [www.weyerhaeuser.com/#sle](http://www.weyerhaeuser.com/#sle).

#### 2.4. CONSTRUCTION PANELS

- A. Roof Sheathing: Any PS 2 type, rated Structural I Sheathing.
  1. Bond Classification: Exterior.
  2. Span Rating: 60.
  3. Performance Category: 3/4 PERF CAT.
- B. Roof Sheathing: Oriented strand board wood structural panel; PS 2.
  1. Grade: Structural 1 Sheathing.
  2. Bond Classification: Exposure 1.
  3. Performance Category: 5/8 PERF CAT.
- C. Wall Sheathing: Plywood, PS 1, Grade C-D, Exposure I.
- D. Wall Sheathing: Glass mat faced gypsum, ASTM C1177/C1177M, 5/8 inch Type X fire resistant (16 mm Type X fire resistant).
  1. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
  2. Manufacturers:
    - a. Georgia-Pacific Gypsum; DensGlass Sheathing: [www.gpgypsum.com/#sle](http://www.gpgypsum.com/#sle).
    - b. Substitutions: See Section 01 6000 - Product Requirements.
- E. Other Applications:
  1. Plywood Concealed From View But Located Within Exterior Enclosure: PS 1, C-C Plugged or better, Exterior grade.
  2. Plywood Exposed to View But Not Exposed to Weather: PS 1, A-D, or better.
  3. Other Locations: PS 1, C-D Plugged or better.

#### 2.5. ACCESSORIES

- A. Fasteners and Anchors:
  1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
- B. Die-Stamped Connectors: Hot dipped galvanized steel, sized to suit framing conditions.
  1. For contact with preservative treated wood in exposed locations, provide minimum G185 (Z550) galvanizing complying with ASTM A653/A653M.
- C. Joist Hangers: Hot dipped galvanized steel, sized to suit framing conditions.
  1. For contact with preservative treated wood in exposed locations, provide minimum G185 (Z550) galvanizing complying with ASTM A653/A653M.
- D. Sill Gasket on Top of Foundation Wall: 1/4 inch (6 mm) thick, plate width, closed cell plastic foam from continuous rolls.
- E. Sill Flashing: As specified in Section 07 6200.
- F. Water-Resistive Barrier: As specified in Section 07 2500.

## **2.6. FACTORY WOOD TREATMENT**

- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.

## **PART 3 EXECUTION**

### **3.1. PREPARATION**

- A. Where wood framing bears on cementitious foundations, install full width sill flashing continuous over top of foundation, lap ends of flashing minimum of 4 inches (100 mm) and seal.
- B. Install sill gasket under sill plate of framed walls bearing on foundations; puncture gasket cleanly to fit tightly around protruding anchor bolts.
- C. Coordinate installation of rough carpentry members specified in other sections.

### **3.2. INSTALLATION - GENERAL**

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

### **3.3. FRAMING INSTALLATION**

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
- C. Install structural members full length without splices unless otherwise specifically detailed.
- D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes.
- E. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.
- F. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

### **3.4. BLOCKING, NAILERS, AND SUPPORTS**

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

- B. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- C. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.

### **3.5. ROOF-RELATED CARPENTRY**

- A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.
- B. Provide wood curb at all roof openings except where specifically indicated otherwise. Form corners by alternating lapping side members.

### **3.6. INSTALLATION OF CONSTRUCTION PANELS**

- A. Roof Sheathing: Secure panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
  - 1. Nail panels to framing; staples are not permitted.
- B. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.
  - 1. Place water-resistive barrier horizontally over wall sheathing, weather lapping edges and ends.

### **3.7. TOLERANCES**

- A. Framing Members: 1/4 inch (6 mm) from true position, maximum.
- B. Variation from Plane (Other than Floors): 1/4 inch in 10 feet (2 mm/m) maximum, and 1/4 inch in 30 feet (7 mm in 10 m) maximum.

### **3.8. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for additional requirements.

### **3.9. CLEANING**

- A. Waste Disposal: Comply with the requirements of Section 01 7419 - Construction Waste Management and Disposal.
  - 1. Comply with applicable regulations.
  - 2. Do not burn scrap on project site.
  - 3. Do not burn scraps that have been pressure treated.
  - 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.
- B. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill.
- C. Prevent sawdust and wood shavings from entering the storm drainage system.

## **END OF SECTION**





## **SECTION 06 1800 - GLUED-LAMINATED CONSTRUCTION**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Glue laminated wood beams.
- B. Steel hardware and attachment brackets.

#### **1.2. REFERENCE STANDARDS**

- A. AITC 117 - Standard Specifications for Structural Glued Laminated Timber of Softwood Species; 2010.
- B. AITC A190.1 - American National Standard for Wood Products - Structural Glued Laminated Timber; 2007.
- C. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- D. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- E. ASTM D2559 - Standard Specification for Adhesives for Bonded Structural Wood Products for Use Under Exterior Exposure Conditions; 2012a (Reapproved 2018).
- F. RIS (GR) - Standard Specifications for Grades of California Redwood Lumber; 2000.
- G. WCLIB (GR) - Standard Grading Rules for West Coast Lumber No. 17; 2015.

#### **1.3. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate framing system, sizes and spacing of members, loads and cambers, bearing and anchor details, bridging and bracing, framed openings.

#### **1.4. DELIVERY, STORAGE, AND HANDLING**

- A. Protect members to AITC requirements for individually wrapped.
- B. Leave individual wrapping in place until finishing occurs.

### **PART 2 PRODUCTS**

#### **2.1. MANUFACTURERS**

- A. Glued-Laminated Structural Units:
  - 1. Sentinel Structures, Inc; \_\_\_\_: [www.sentinelstructures.com/#sle](http://www.sentinelstructures.com/#sle).
  - 2. Western Wood Structures, Inc; \_\_\_\_: [www.westernwoodstructures.com/#sle](http://www.westernwoodstructures.com/#sle).
  - 3. Substitutions: See Section 01 6000 - Product Requirements.

#### **2.2. GLUED-LAMINATED UNITS**

- A. Glued-Laminated Units: Fabricate in accordance with AITC 117 Architectural grade.

1. Verify dimensions and site conditions prior to fabrication.
2. Cut and fit members accurately to length to achieve tight joint fit.
3. Fabricate member with camber built in.
4. Do not splice or join members in locations other than those indicated without permission.
5. After end trimming, seal with penetrating sealer in accordance with AITC requirements.

### **2.3. MATERIALS**

- A. Lumber: Softwood lumber complying with RIS (GR) grading rules with 12 percent maximum moisture content before fabrication. Design for the following values:
- B. Steel Connections and Brackets: ASTM A36/A36M weldable quality, galvanize per ASTM A123/A123M.
- C. Laminating Adhesive: Tested for wet/exterior service in accordance with ASTM D2559.
- D. Wood Sealer: .

### **2.4. WOOD TREATMENT**

- A. Factory-Treated Lumber: Comply with requirements of AWPA U1 - Use Category System for pressure impregnated wood treatments determined by use categories, expected service conditions, and specific applications.

### **2.5. FABRICATION**

- A. Fabricate glue laminated structural members in accordance with AITC Architectural grade.
- B. Verify dimensions and site conditions prior to fabrication.
- C. Cut and fit members accurately to length to achieve tight joint fit.
- D. Fabricate member with camber built in.
- E. Do not splice or join members in locations other than those indicated without permission.
- F. After end trimming, seal with penetrating sealer in accordance with AITC requirements.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that supports are ready to receive units.
- B. Verify sufficient end bearing area.

### **3.2. PREPARATION**

- A. Coordinate placement of bearing items.

### **3.3. ERECTION**

- A. Lift members using protective straps to prevent visible damage.

- B. Set structural members level and plumb, in correct positions or sloped where indicated.
- C. Swab and seal the interior wood surfaces of field drilled holes in members with primer.

#### **3.4. TOLERANCES**

- A. Framing Members: 1/2 inch (12 mm) maximum from true position.

**END OF SECTION**



## **SECTION 07 0150.19 - PREPARATION FOR RE-ROOFING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Re-cover of existing roofing system in preparation for entire new roofing system.
- B. Removal of existing flashing and counterflashings.
- C. Temporary roofing protection.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 07 5100 - Built-Up Bituminous Roofing.
- B. Section 07 5400 - Thermoplastic Membrane Roofing.
- C. Section 07 6200 - Sheet Metal Flashing and Trim: Replacement of flashing and counterflashings.

#### **1.3. REFERENCE STANDARDS**

- A. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2018.
- B. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2013.

#### **1.4. ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate with affected mechanical and electrical work associated with roof penetrations.
- B. Preinstallation Meeting: Convene one week before starting work of this section.
  - 1. Attendees:
    - a. Architect.
    - b. Contractor.
    - c. Owner.
    - d. Installer.
  - 2. Meeting Agenda: Provide agenda to participants prior to meeting in preparation for discussions on the following:
    - a. Removal and installation schedule.
    - b. Necessary preparatory work.
    - c. Protection before, during, and after roofing system installation.
    - d. Installation of new roofing system.
    - e. Temporary roofing and daily terminations.
    - f. Transitions and connection to and with other work.
    - g. Inspections and testing of installed systems.
- C. Schedule work to coincide with commencement of installation of new roofing system.

#### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

- B. Product Data: Submit for each type of material.

#### **1.6. QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of experience.

#### **1.7. DELIVERY, STORAGE, AND HANDLING**

- A. Ensure storage and staging of materials does not exceed static and dynamic load-bearing capacities of roof decking.

#### **1.8. FIELD CONDITIONS**

- A. Existing Roofing System: Metal PEMB roof roofing.
- B. Maintain continuous temporary protection prior to and during installation of new roofing system.
- C. Provide notice at least three days before starting activities that will affect normal building operations.
- D. Verify that occupants have been evacuated from building areas when work on structurally impaired roof decking is scheduled to begin.
- E. Owner will occupy building areas directly below re-roofing area.
  - 1. Do not disrupt Owner's operations or activities.
  - 2. Maintain access of Owner's personnel to corridors, existing walkways, and adjacent buildings.

#### **1.9. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

### **PART 2 PRODUCTS**

#### **2.1. COMPONENTS**

- A. Refer to following sections for additional information on components relating to this work:
  - 1. Recovering of existing roofing system in preparation for entire new roofing system, refer to Section 07 5400.

#### **2.2. MATERIALS**

- A. Patching Materials: Provide necessary materials in accordance with requirements of existing roofing system.
- B. Temporary Roofing Protection Materials:
  - 1. Contractor's responsibility to select appropriate materials for temporary protection of roofing areas as determined necessary for this work.
- C. Roofing Recover Materials:

1. Contractor's responsibility to select appropriate materials for roofing re-cover as determined necessary for this work.

### **2.3. ACCESSORIES**

- A. Fasteners: Type and size as required and compatible with existing and new roofing system to resist local wind uplift.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that existing roof surface has been cleared of materials being removed from existing roofing system and ready for next phase of work as required.

### **3.2. PREPARATION**

- A. Sweep roof surface clean of loose matter.
- B. Remove loose refuse and dispose of properly off-site.

### **3.3. MATERIAL REMOVAL**

- A. Repair existing metal deck surface to receive new deck surfacing specified in Section 07 5423.

### **3.4. INSTALLATION**

- A. Coordinate scope of this work with requirements for installation of new roofing system, refer to Section 07 5100 for additional requirements.

### **3.5. PROTECTION**

- A. Install recover board over exposed insulation.

## **END OF SECTION**





## **SECTION 07 2100 - THERMAL INSULATION**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Batt insulation and vapor retarder in exterior wall construction.
- B. Batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 06 1000 - Rough Carpentry: Supporting construction for batt insulation.
- C. Section 07 2500 - Weather Barriers: Separate air barrier and vapor retarder materials.
- D. Section 07 5400 - Thermoplastic Membrane Roofing: Insulation specified as part of roofing system.

#### **1.3. REFERENCE STANDARDS**

- A. ASTM C240 - Standard Test Methods of Testing Cellular Glass Insulation Block; 2016.
- B. ASTM C553 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications; 2013.
- C. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2017.
- D. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2018.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2018b.
- F. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace At 750 Degrees C; 2016a.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- C. Manufacturer's Installation Instructions: Include information on special environmental conditions required for installation and installation techniques.

#### **1.5. QUALITY ASSURANCE**

- A. Air Barrier Association of America (ABAA) Quality Assurance Program (QAP); [www.airbarrier.org/#sle](http://www.airbarrier.org/#sle):
  - 1. Installer Qualification: Use accredited contractor, certified installers, evaluated materials, and third-party field quality control audit.

2. Manufacturer Qualification: Use evaluated materials from a single manufacturer regularly engaged in air barrier material manufacture. Use secondary materials approved in writing by primary material manufacturer.

## **1.6. FIELD CONDITIONS**

- A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

## **PART 2 PRODUCTS**

### **2.1. APPLICATIONS**

- A. Insulation in Metal Framed Walls: Batt insulation with separate vapor retarder.

### **2.2. BATT INSULATION MATERIALS**

- A. Where batt insulation is indicated, either glass fiber or mineral fiber batt insulation may be used, at Contractor's option.
- B. Glass Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
  1. Combustibility: Non-combustible, when tested in accordance with ASTM E136, except for facing, if any.
  2. Thermal Resistance: R-value (RSI-value) of 21 ( ).
  3. Manufacturers:
    - a. CertainTeed Corporation; \_\_\_\_: [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
    - b. Johns Manville; \_\_\_\_: [www.jm.com/#sle](http://www.jm.com/#sle).
    - c. Owens Corning Corporation; EcoTouch PINK FIBERGLAS Insulation: [www.ocbuildingspec.com/#sle](http://www.ocbuildingspec.com/#sle).
    - d. Substitutions: See Section 01 6000 - Product Requirements.
- C. Mineral Fiber Batt Insulation: Flexible or semi-rigid preformed batt or blanket, complying with ASTM C665; friction fit; unfaced flame spread index of 0 (zero) when tested in accordance with ASTM E84.
  1. Smoke Developed Index: 0 (zero), when tested in accordance with ASTM E84.
  2. Thermal Resistance: R-value (RSI-value) of 21 ( ).
  3. Manufacturers:
    - a. Johns Manville; MinWool Sound Attenuation Fire Batts: [www.jm.com/#sle](http://www.jm.com/#sle).
    - b. Knauf Insulation; EcoBatt Insulation: [www.knaufinsulation.com/#sle](http://www.knaufinsulation.com/#sle).
    - c. ROCKWOOL (ROXUL, Inc); COMFORTBATT: [www.rockwool.com/#sle](http://www.rockwool.com/#sle).
    - d. Thermafiber, Inc; SAFB: [www.thermafiber.com/#sle](http://www.thermafiber.com/#sle).

### **2.3. ACCESSORIES**

- A. Sheet Vapor Retarder: Specified in Section 07 2500.
- B. Tape: Reinforced polyethylene film with acrylic pressure sensitive adhesive.
  1. Application: Sealing of interior circular penetrations, such as pipes or cables.
  2. Width: Are required for application.

- C. Insulation Fasteners: Appropriate for purpose intended.
- D. Wire Mesh: Galvanized steel, hexagonal wire mesh.
- E. Adhesive: Type recommended by insulation manufacturer for application.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.
- B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.

### **3.2. BATT INSTALLATION**

- A. Install insulation and vapor retarder in accordance with manufacturer's instructions.
- B. Install in exterior wall and roof spaces without gaps or voids. Do not compress insulation.
- C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
- E. Tape seal butt ends, lapped flanges, and tears or cuts in membrane.
- F. At metal framing, place vapor retarder on warm side of insulation; lap and seal sheet retarder joints over member face.
- G. Tape seal tears or cuts in vapor retarder.
- H. Extend vapor retarder tightly to full perimeter of adjacent window and door frames and other items interrupting the plane of the membrane. Tape seal in place.
- I. Coordinate work of this section with requirements for vapor retarder specified in Section 07 2500.
- J. Coordinate work of this section with construction of air barrier seal specified in Section 07 2500.

### **3.3. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for additional requirements.

### **3.4. PROTECTION**

- A. Do not permit installed insulation to be damaged prior to its concealment.

## **END OF SECTION**



## **SECTION 07 2500 - WEATHER BARRIERS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Vapor Retarders: Materials to make exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls water vapor resistant and air tight.
- B. Air Barriers: Materials that form a system to stop passage of air through exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 03 3000 - Cast-in-Place Concrete: Vapor retarder under concrete slabs on grade.
- B. Section 05 4000 - Cold-Formed Metal Framing: Water-resistive barrier under exterior cladding.
- C. Section 06 1000 - Rough Carpentry: Water-resistive barrier under exterior cladding.
- D. Section 07 5400 - Thermoplastic Membrane Roofing: Vapor retarder installed as part of roofing system.
- E. Section 07 6200 - Sheet Metal Flashing and Trim: Metal flashings installed in conjunction with weather barriers.
- F. Section 07 9200 - Joint Sealants: Sealing building expansion joints.
- G. Section 09 2116 - Gypsum Board Assemblies: Water-resistive barrier under exterior cladding.

#### **1.3. DEFINITIONS**

- A. Weather Barrier: Assemblies that form either water-resistive barriers, air barriers, or vapor retarders.
- B. Air Barrier: Air tight barrier made of material that is relatively air impermeable but water vapor permeable, both to the degree specified, with sealed seams and with sealed joints to adjacent surfaces. Note: For the purposes of this specification, vapor impermeable air barriers are classified as vapor retarders.
- C. Vapor Retarder: Air tight barrier made of material that is relatively water vapor impermeable, to the degree specified, with sealed seams and with sealed joints to adjacent surfaces.
  - 1. Water Vapor Permeance: For purposes of conversion,  $57.2 \text{ ng}/(\text{Pa s sq m}) = 1 \text{ perm.}$
- D. Water-Resistive Barrier: Water-shedding barrier made of material that is moisture resistant, to the degree specified, intended to be installed to shed water without sealed seams.

#### **1.4. REFERENCE STANDARDS**

- A. AATCC Test Method 127 - Water Resistance: Hydrostatic Pressure Test; 2014.

- B. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2013.
- C. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2017.
- D. ASTM D4397 - Standard Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications; 2016.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2018b.
- F. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2016.
- G. ASTM E2178 - Standard Test Method for Air Permeance of Building Materials; 2013.

#### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on material characteristics.
- C. ABAA Field Quality Control Submittals: Submit third-party reports of testing and inspection required by ABAA QAP.
- D. ABAA Manufacturer Qualification: Submit documentation of current evaluation of proposed manufacturer and materials.
- E. ABAA Installer Qualification: Submit documentation of current contractor accreditation and current installer certification; keep copies of each contractor accreditation and installer certification on site during and after installation, and present on-site documentation upon request.

#### **1.6. QUALITY ASSURANCE**

- A. Air Barrier Association of America (ABAA) Quality Assurance Program (QAP); [www.airbarrier.org](http://www.airbarrier.org):
  - 1. Installer Qualification: Use accredited contractor, certified installers, evaluated materials, and third-party field quality control audit.
  - 2. Manufacturer Qualification: Use evaluated materials from a single manufacturer regularly engaged in air barrier material manufacture, and use secondary materials approved in writing by primary material manufacturer.

#### **1.7. FIELD CONDITIONS**

- A. Maintain temperature and humidity recommended by the materials manufacturers before, during and after installation.

### **PART 2 PRODUCTS**

#### **2.1. WEATHER BARRIER ASSEMBLIES**

- A. Air Barrier:

1. On outside surface of sheathing of exterior walls use air barrier sheet, self-adhesive type.
- B. Interior Vapor Retarder:
  1. On inside face of studs of exterior walls, under cladding, use mechanically fastened vapor retarder sheet.

## **2.2. AIR BARRIER MATERIALS (WATER VAPOR PERMEABLE AND WATER-RESISTIVE)**

- A. Air Barrier Sheet, Mechanically Fastened:
  1. Air Permeance: 0.004 cubic feet per minute per square foot (0.02 L/s/sq m), maximum, when tested in accordance with ASTM E2178.
  2. Water Vapor Permeance: 5 perms (286 ng/(Pa s sq m)), minimum, when tested in accordance with ASTM E96/E96M Procedure A (desiccant procedure).
  3. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to 180 days of weather exposure.
  4. Surface Burning Characteristics: Flame spread index of 25 or less, and smoke developed index of 50 or less, when tested in accordance with ASTM E84.
  5. Seam and Perimeter Tape: Polyethylene self adhering type, mesh reinforced, 2 inches (50 mm) wide, compatible with sheet material; unless otherwise specified.
  6. Manufacturers:
    - a. DuPont Building Innovations; Tyvek Commercial Wrap D with Tyvek Fluid Applied Flashing - Brush Formulation, Tyvek Fluid Applied Flashing and Joint Compound, FlexWrap NF, StraightFlash, StraightFlash VF, Tyvek Wrap Caps, and Tyvek Tape: [www.dupont.com/#sle](http://www.dupont.com/#sle).
    - b. Substitutions: See Section 01 6000 - Product Requirements.
- B. Air Barrier Sheet, Self-Adhered:
  1. Air Permeance: 0.004 cubic feet per minute per square foot (0.02 L/s/sq m), maximum, when tested in accordance with ASTM E2178.
  2. Water Vapor Permeance: 10 perms (572 ng/(Pa s sq m)), minimum, when tested in accordance with ASTM E96/E96M Procedure A (desiccant procedure).
  3. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to 90 days of weather exposure.
  4. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less (Class A), when tested in accordance with ASTM E84.
  5. Seam and Perimeter Tape: As recommended by sheet manufacturer.

## **2.3. VAPOR RETARDER MATERIALS (AIR BARRIER AND WATER-RESISTIVE)**

- A. Vapor Retarder Sheet Interior Surface Exterior Walls: ASTM D4397 polyethylene film reinforced with glass fiber square mesh, clear.
  1. Thickness: 10 mil, 0.010 inch (0.254 mm).
  2. Water Vapor Permeance: As required by referenced standard for thickness specified.
  3. Seam and Perimeter Tape: Polyethylene self adhering type, mesh reinforced, 2 inches (50 mm) wide, compatible with sheet material.

## **2.4. ACCESSORIES**

- A. Sealants, Tapes, and Accessories for Sealing Weather Barrier and Sealing Weather Barrier to Adjacent Substrates: As specified or as recommended by weather barrier manufacturer.
- B. Flexible Flashing: Self-adhesive sheet flashing complying with ASTM D1970/D1970M, except slip resistance requirement is waived if not installed on a roof.
  - 1. Manufacturers:
    - a. DuPont Building Innovations; FlexWrap NF: [www.dupont.com/#sle](http://www.dupont.com/#sle).
    - b. DuPont Building Innovations; StraightFlash: [www.dupont.com/#sle](http://www.dupont.com/#sle).
    - c. DuPont Building Innovations; StraightFlash VF: [www.dupont.com/#sle](http://www.dupont.com/#sle).
    - d. Substitutions: See Section 01 6000 - Product Requirements.
- C. Thinners and Cleaners: As recommended by material manufacturer.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that surfaces and conditions are ready to accept the work of this section.

### **3.2. PREPARATION**

- A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.
- B. Clean and prime substrate surfaces to receive adhesives in accordance with manufacturer's instructions.

### **3.3. INSTALLATION**

- A. Install materials in accordance with manufacturer's instructions.
- B. Air Barriers: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
- C. Vapor Retarders: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
- D. Mechanically Fastened Sheets - On Exterior:
  - 1. Install sheets shingle-fashion to shed water, with seams generally horizontal.
  - 2. Overlap seams as recommended by manufacturer but at least 6 inches.
  - 3. Overlap at outside and inside corners as recommended by manufacturer but at least 12 inches (305 mm).
  - 4. For applications specified to be air tight, seal seams, laps, penetrations, tears, and cuts with self-adhesive tape; use only large-headed, gasketed fasteners recommended by the manufacturer.
  - 5. Install air barrier and vapor retarder UNDER jamb flashings.
  - 6. Install head flashings under weather barrier.
  - 7. At openings to be filled with frames having nailing flanges, wrap excess sheet into opening; at head, seal sheet over flange and flashing.



- E. Mechanically Fastened Sheets - Vapor Retarder On Interior:
  - 1. When insulation is to be installed in assembly, install vapor retarder over insulation.
  - 2. Seal seams, laps, perimeter edges, penetrations, tears, and cuts with self-adhesive tape, making air tight seal.
  - 3. Locate laps at a framing member; at laps fasten one sheet to framing member then tape overlapping sheet to first sheet.
  - 4. Seal entire perimeter to structure, window and door frames, and other penetrations.
  - 5. Where conduit, pipes, wires, ducts, outlet boxes, and other items are installed in insulation cavity, pass vapor retarder sheet behind item but over insulation and maintain air tight seal.
- F. Openings and Penetrations in Exterior Weather Barriers:
  - 1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches (125 mm) onto weather barrier and at least 6 inches (150 mm) up jambs; mechanically fasten stretched edges.
  - 2. At openings to be filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches (100 mm) wide; do not seal sill flange.
  - 3. At openings to be filled with non-flanged frames, seal weather barrier to each side of opening framing, using flashing at least 9 inches (230 mm) wide, covering entire depth of framing.
  - 4. At head of openings, install flashing under weather barrier extending at least 2 inches (50 mm) beyond face of jambs; seal weather barrier to flashing.
  - 5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
  - 6. Service and Other Penetrations: Form flashing around penetrating item and seal to weather barrier surface.

### **3.4. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Do not cover installed weather barriers until required inspections have been completed.

### **3.5. PROTECTION**

- A. Do not leave materials exposed to weather longer than recommended by manufacturer.
- B. Do not leave paper- or felt-based barriers exposed to weather for longer than one week.

**END OF SECTION**



## **SECTION 07 4213 - METAL WALL PANELS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Manufactured metal panels for exterior wall panels, interior liner panels, soffit panels, and subgirt framing assembly, with accessory components.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 07 9200 - Joint Sealants: Sealing joints between metal wall panel system and adjacent construction.

#### **1.3. REFERENCE STANDARDS**

- A. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document); 2015.
- B. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- C. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2010 (Reapproved 2015).

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate dimensions, layout, joints, construction details, , and methods of anchorage.

#### **1.5. QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of experience.

#### **1.6. MOCK-UP**

- A. Mock-up may remain as part of the Work.

#### **1.7. DELIVERY, STORAGE, AND HANDLING**

- A. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
- B. Store prefinished material off the ground and protected from weather; prevent twisting, bending, or abrasion; provide ventilation; slope metal sheets to ensure proper drainage.
- C. Prevent contact with materials that may cause discoloration or staining of products.

#### **1.8. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

## **PART 2 PRODUCTS**

### **2.1. MANUFACTURERS**

- A. Metal Soffit Panels:
  - 1. Taylor Metal Products; Lifetime Soffit.
  - 2. Substitutions: See Section 01 6000 - Product Requirements.

### **2.2. MANUFACTURED METAL PANELS**

- A. Soffit Panels:
  - 1. Profile: Double Bead.
  - 2. Material: Precoated steel sheet, 24 gage, inch ( mm) minimum thickness.
  - 3. Color: As selected by Architect from manufacturer's standard line.
- B. Trim: Same material, thickness and finish as exterior sheets; brake formed to required profiles.
- C. Anchors: Galvanized steel.

### **2.3. MATERIALS**

- A. Precoated Steel Sheet: Aluminum-zinc alloy-coated steel sheet, ASTM A792/A792M, Commercial Steel (CS)) or Forming Steel (FS), with AZ50/AZM150 coating; continuous-coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.

### **2.4. FINISHES**

- A. Exposed Surface Finish: Panel manufacturer's standard polyvinylidene fluoride (PVDF) coating, top coat over epoxy primer.

### **2.5. ACCESSORIES**

- A. Gaskets: Manufacturer's standard type suitable for use with system, permanently resilient; ultraviolet and ozone resistant.
- B. Concealed Sealants: Non-curing butyl sealant or tape sealant.
- C. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
- D. Fasteners: Manufacturer's standard type to suit application; with soft neoprene washers, steel, hot dip galvanized. Fastener cap same color as exterior panel.
- E. Field Touch-up Paint: As recommended by panel manufacturer.
- F. Bituminous Paint: Asphalt base.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that building framing members are ready to receive panels.

### **3.2. PREPARATION**

- A. Install subgirts perpendicular to panel length, securely fastened to substrates and shimmed and leveled to uniform plane. Space at intervals indicated.

### **3.3. INSTALLATION**

- A. Install panels on soffits in accordance with manufacturer's instructions.
- B. Locate joints over supports.

### **3.4. TOLERANCES**

- A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch (1.6 mm).
- B. Maximum Variation from Plane or Location Indicated on Drawings: 1/4 inch (6.4 mm).

### **3.5. CLEANING**

- A. Remove site cuttings from finish surfaces.
- B. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.
- C. Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.
- D. Upon completion of installation, thoroughly clean prefinished aluminum surfaces in accordance with AAMA 609 & 610.

**END OF SECTION**



## **SECTION 07 4646 - FIBER-CEMENT SIDING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Fiber-cement siding.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 07 2500 - Weather Barriers: Weather barrier under siding.
- B. Section 07 9200 - Joint Sealants: Sealing joints between siding and adjacent construction and fixtures.

#### **1.3. REFERENCE STANDARDS**

- A. ASTM C1186 - Standard Specification for Flat Fiber Cement Sheets; 2008 (Reapproved 2016).

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit manufacturer's data sheets on each product to be used, including:
  - 1. Manufacturer's requirements for related materials to be installed by others.
  - 2. Preparation instructions and recommendations.
  - 3. Storage and handling requirements and recommendations.
  - 4. Installation methods, including nail patterns.

#### **1.5. QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in performing work of the type specified in this section with minimum three years of experience.

#### **1.6. DELIVERY, STORAGE, AND HANDLING**

- A. Store products under waterproof cover and elevated above grade, on a flat surface.

#### **1.7. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

### **PART 2 PRODUCTS**

#### **2.1. FIBER-CEMENT SIDING**

- A. Panel Siding: Vertically oriented panels made of cement and cellulose fiber formed under high pressure with integral surface texture, complying to ASTM C1186, Type A, Grade II; with machined edges, for nail attachment.
  - 1. Texture: Stucco patterned.

2. Length (Height): 96 inches (2400 mm), nominal.
3. Width: 48 inches (1220 mm).
4. Thickness: 0.312 inch (\_\_\_ mm), nominal.
5. Finish: Factory applied stain.
6. Color: As selected by Architect from manufacturers full range of available colors.
7. Warranty: 30 year limited; .
8. Manufacturers:
  - a. James Hardie Building Products, Inc; \_\_\_\_: [www.jameshardie.com/#sle](http://www.jameshardie.com/#sle).
  - b. Nichiha USA, Inc; \_\_\_\_: [www.nichiha.com/#sle](http://www.nichiha.com/#sle).
  - c. Substitutions: See Section 01 6000 - Product Requirements.

## **2.2. ACCESSORIES**

- A. Trim: Same material and texture as siding.
- B. Fasteners: Galvanized or corrosion resistant; length as required to penetrate minimum 1-1/4 inch (32 mm).
- C. Sealant: Elastomeric, polyurethane or silyl-terminated polyether/polyurethane, and capable of being painted.
- D. Finish Paint: Latex house paint acceptable to siding manufacturer; primer recommended by paint manufacturer.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Examine substrate, clean and repair as required to eliminate conditions that would be detrimental to proper installation.
- B. Verify that weather barrier has been installed over substrate completely and correctly.
- C. Do not begin until unacceptable conditions have been corrected.
- D. If substrate preparation is responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### **3.2. PREPARATION**

- A. Install Sheet Metal Flashing:
  1. Above door and window trim and casings.
  2. Above horizontal trim in field of siding.

### **3.3. INSTALLATION**

- A. Install in accordance with manufacturer's instructions and recommendations.
  1. Read warranty and comply with terms necessary to maintain warranty coverage.
  2. Use trim details indicated on drawings.
  3. Touch up field cut edges before installing.
  4. Pre-drill nail holes if necessary to prevent breakage.



- B. Over Steel Studs: Use hot-dipped galvanized self-tapping screws, with the points of at least three screws penetrating each stud the panel crosses and at panel ends.
- C. Allow space for thermal movement between both ends of siding panels that butt against trim; seal joint between panel and trim with specified sealant.
- D. Joints in Vertical Siding: Install Z-flashing in horizontal joints between successive courses of vertical siding.
- E. Do not install siding less than 6 inches (150 mm) from surface of ground nor closer than 1 inch (25 mm) to roofs, patios, porches, and other surfaces where water may collect.
- F. After installation, seal joints except lap joints of lap siding; seal around penetrations, and paint exposed cut edges.
- G. Finish Painting: Within one week after installation, paint siding and trim with one coat primer and two coats finish paint.

#### **3.4. PROTECTION**

- A. Protect installed products until Date of Substantial Completion.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

#### **END OF SECTION**



## **SECTION 07 5400 - THERMOPLASTIC MEMBRANE ROOFING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Insulation, flat.
- B. Insulation, flute filled on existing metal roof.
- C. Vapor-impermeable scrim (over existing PEMB insulation)
- D. Flashings.
- E. Roofing cant strips.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 06 1000 - Rough Carpentry: Wood nailers and curbs.
- B. Section 07 0150.19 - Preparation for Re-Roofing - .
- C. Section 07 6200 - Sheet Metal Flashing and Trim: Counterflashings.
- D. Section 07 7200 - Roof Accessories: Roof-mounted units; prefabricated curbs.

#### **1.3. REFERENCE STANDARDS**

- A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- B. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2018.
- C. ASTM D6878/D6878M - Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing; 2017.
- D. NRCA (RM) - The NRCA Roofing Manual; 2018.
- E. NRCA (WM) - The NRCA Waterproofing Manual; 2005.

#### **1.4. ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene one week before starting work of this section.
  - 1. Review preparation and installation procedures and coordinating and scheduling required with related work.

#### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating membrane materials, flashing materials, insulation, surfacing, fasteners, and Impermeable Vapor Barrier Scrim.
- C. Shop Drawings: Submit drawings that indicate joint or termination detail conditions, conditions of interface with other materials, and paver layout.
- D. Manufacturer's Qualification Statement.
- E. Installer's Qualification Statement.

- F. Warranty Documentation:
  - 1. Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
  - 2. Submit installer's certification that installation complies with warranty conditions for waterproof membrane.

#### **1.6. QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum ten years of documented experience.
- B. Installer Qualifications: Company specializing in performing the work of this section with at least three years of experience.

#### **1.7. DELIVERY, STORAGE, AND HANDLING**

- A. Deliver materials in manufacturer's original containers, dry and undamaged, with seals and labels intact.
- B. Store materials in weather protected environment, clear of ground and moisture.
- C. Ensure storage and staging of materials does not exceed static and dynamic load-bearing capacities of roof decking.
- D. Protect foam insulation from direct exposure to sunlight.

#### **1.8. FIELD CONDITIONS**

- A. Do not apply roofing membrane during unsuitable weather.
- B. Do not apply roofing membrane when ambient temperature is below 40 degrees F (5 degrees C) or above \_\_\_\_ degrees F (\_\_\_\_ degrees C).
- C. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.
- E. Schedule applications so that no partially completed sections of roof are left exposed at end of workday.

#### **1.9. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Material Warranty: Provide membrane manufacturer's warranty agreeing to replace material that shows manufacturing defects within five years after installation.
- C. System Warranty: Provide manufacturer's system warranty agreeing to repair or replace roofing that leaks or is damaged due to wind or other natural causes.
  - 1. Warranty Term: 20 years.
  - 2. For repair and replacement include costs of both material and labor in warranty.
  - 3. Exceptions are not Permitted:
    - a. Damage due to roof traffic.

- b. Damage due to wind speed greater than 56 mph (90 km/h) but less than 90 mph (145 km/h).

## **PART 2 PRODUCTS**

### **2.1. MANUFACTURERS**

- A. Thermoplastic Polyolefin (TPO) Membrane Roofing Materials:
  - 1. Johns Manville; JM-TPO 60 MIL-Retrofit JM Rhinoplate: [www.jm.com](http://www.jm.com).
  - 2. Substitutions: See Section 01 6000 - Product Requirements.
- B. Insulation:
  - 1. John Manville; Energy 3 Flute Fill.
  - 2. Substitutions: See Section 01 6000 - Product Requirements.

### **2.2. MEMBRANE ROOFING AND ASSOCIATED MATERIALS**

- A. Membrane Roofing Materials:
  - 1. TPO: Thermoplastic polyolefin (TPO) complying with ASTM D6878/D6878M, sheet contains reinforcing fabrics or scrims.
    - a. Thickness: 60 mil, 0.060 inch (1.5 mm), minimum.
  - 2. Sheet Width: Factory fabricated into largest sheets possible.
  - 3. Color: White.
- B. Seaming Materials: As recommended by membrane manufacturer.
- C. Membrane Fasteners: As recommended and approved by membrane manufacturer.
  - 1. Disc Washers and Screws: JM RhinoPlate System.
- D. Vapor Retarder: Impermeable Vapor Barrier Scrim; compatible with roofing and insulation materials. Installed interior of existing batt insulation. Field verify condition of existing and type.
- E. Flexible Flashing Material: Same material as membrane.

### **2.3. DECK SHEATHING AND COVER BOARDS**

- A. Cover Board: Polyisocyanurate (ISO) board insulation, complying with ASTM C1289, Type II, Class 4 - Faced with coated or uncoated polymer-bonded glass fiber mat facers on both major surfaces of the core foam. This product is used at a maximum thickness of 1/2 inch (12.7 mm), and the following characteristics:
  - 1. Compressive Strength: 150 psi (1,034 kPa).
  - 2. Board Size: 48 by 96 inch (1220 by 2440 mm).
  - 3. Board Thickness: 1/4 inch (6.3 mm).
  - 4. Manufacturers:
    - a. John Manville; Invinsa Roof Board.
    - b. Substitutions: See Section 01 6000 - Product Requirements.

### **2.4. INSULATION**

- A. Polyisocyanurate (ISO) Board Insulation: Rigid cellular foam, complying with ASTM C1289.
  - 1. Classifications:

- a. Type II:
  - 1) Class 1 - Faced with glass fiber reinforced cellulosic felt facers on both major surfaces of core foam.
  - 2) Compressive Strength: Classes 1-2-3, Grade 3 - 25 psi (172 kPa), minimum.
  - 3) Thermal Resistance, R-value (RSI-value): At 1-1/2 inch (38.1 mm) thick; Class 1, Grades 1-2-3 - 8.4 (1.48) at 75 degrees F (24 degrees C).
- 2. Board Size: 48 by 96 inch (1220 by 2440 mm).
- 3. Board Thickness: As required to fill metal roof flutes.
- 4. Manufacturers:
  - a. Johns Manville; Energy 3.
  - b. Substitutions: See Section 01 6000 - Product Requirements.

## **2.5. ACCESSORIES**

- A. Cant and Edge Strips: Wood fiberboard, compatible with roofing materials; .
- B. Insulation Joint Tape: Glass fiber reinforced type as recommended by insulation manufacturer, compatible with roofing materials; 6 inches (150 mm) wide; self adhering.
- C. Insulation Fasteners: Appropriate for purpose intended and approved by roofing manufacturer.
- D. Membrane Adhesive: As recommended by membrane manufacturer.
- E. Insulation Adhesive: As recommended by insulation manufacturer.
- F. Sealants: As recommended by membrane manufacturer.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that surfaces and site conditions are ready to receive work.
- B. Verify deck is supported and secure.
- C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.
- D. Verify deck surfaces are dry and free of snow or ice.
- E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.

### **3.2. INSTALLATION - GENERAL**

- A. Perform work in accordance with manufacturer's instructions, NRCA (RM), and NRCA (WM) applicable requirements.
- B. Do not apply roofing membrane during unsuitable weather.
- C. Do not apply roofing membrane when ambient temperature is outside the temperature range recommended by manufacturer.
- D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

- E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

### **3.3. INSULATION - UNDER MEMBRANE**

- A. Attachment of Insulation:
  - 1. Mechanically fasten insulation to deck in accordance with roofing manufacturer's instructions.
- B. Cover Boards: Mechanically fasten cover boards in accordance with roofing manufacturer's instructions.
- C. Lay subsequent layers of insulation with joints staggered minimum 6 inch (150 mm) from joints of preceding layer.
- D. Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.
- E. Tape joints of insulation in accordance with roofing and insulation manufacturers' instructions.
- F. Do not apply more insulation than can be covered with membrane in same day.

### **3.4. MEMBRANE APPLICATION**

- A. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching.
- B. Shingle joints on sloped substrate in direction of drainage.
- C. Overlap edges and ends and seal seams by heat welding, minimum 3 inches (75 mm). Seal permanently waterproof.
- D. Mechanical Attachment: Apply membrane and mechanical attachment devices in accordance with manufacturer's instructions.
- E. At intersections with vertical surfaces:
  - 1. Extend membrane over cant strips and up a minimum of 6 inches (150 mm) onto vertical surfaces.
  - 2. Fully adhere flexible flashing over membrane and up to nailing strips.
- F. At gravel stops, extend membrane under gravel stop and to the outside face of the wall.
- G. Around roof penetrations, seal flanges and flashings with flexible flashing.
- H. Coordinate installation of roof drains and sumps and related flashings.

### **3.5. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for general requirements for field quality control and inspection.
- B. Require site attendance of roofing and insulation material manufacturers daily during installation of the Work.

### **3.6. CLEANING**

- A. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.

- B. Remove bituminous markings from finished surfaces.
- C. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and comply with their documented instructions.
- D. Repair or replace defaced or damaged finishes caused by work of this section.

### **3.7. PROTECTION**

- A. Protect installed roofing and flashings from construction operations.
- B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.

### **END OF SECTION**



## **SECTION 07 6200 - SHEET METAL FLASHING AND TRIM**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Fabricated sheet metal items, including flashings, counterflashings, gutters, downspouts, and sheet metal roofing.
- B. Sealants for joints within sheet metal fabrications.
- C. Precast concrete splash pads.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 07 7100 - Roof Specialties: Manufactured copings, flashings, and expansion joint covers.
- B. Section 07 7200 - Roof Accessories: Manufactured metal roof curbs.
- C. Section 07 9200 - Joint Sealants: Sealing non-lap joints between sheet metal fabrications and adjacent construction.

#### **1.3. REFERENCE STANDARDS**

- A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).
- B. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.
- C. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.
- D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- F. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007, with Editorial Revision (2012).
- G. CDA A4050 - Copper in Architecture - Handbook; current edition.
- H. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- C. Samples: Submit two samples \_\_\_\_ by \_\_\_\_ inch (\_\_\_\_ by \_\_\_\_ mm) in size illustrating metal finish color.

### **1.5. QUALITY ASSURANCE**

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.

### **1.6. DELIVERY, STORAGE, AND HANDLING**

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

## **PART 2 PRODUCTS**

### **2.1. SHEET MATERIALS**

- A. Pre-Finished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage, (0.0239) inch (0.61 mm) thick base metal, shop pre-coated with PVDF coating.
  - 1. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
  - 2. Color: As selected by Architect from manufacturer's standard colors.

### **2.2. FABRICATION**

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Hem exposed edges on underside 1/2 inch (13 mm); miter and seam corners.
- D. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- E. Fabricate corners from one piece with minimum 18 inch (450 mm) long legs; seam for rigidity, seal with sealant.
- F. Fabricate vertical faces with bottom edge formed outward 1/4 inch (6 mm) and hemmed to form drip.
- G. Fabricate flashings to allow toe to extend 2 inches (50 mm) over roofing gravel. Return and brake edges.

### **2.3. GUTTER AND DOWNSPOUT FABRICATION**

- A. Gutters: SMACNA (ASMM), Rectangular profile.
- B. Downspouts: Rectangular profile.
- C. Gutters and Downspouts: Size for rainfall intensity determined by a storm occurrence of 1 in 10 years in accordance with SMACNA (ASMM).
- D. Accessories: Profiled to suit gutters and downspouts.
  - 1. Anchorage Devices: In accordance with SMACNA (ASMM) requirements.
  - 2. Gutter Supports: Brackets.
  - 3. Downspout Supports: Brackets.

- E. Splash Pads: Precast concrete type, of size and profiles indicated; minimum 3000 psi (21 MPa) at 28 days, with minimum 5 percent air entrainment.
- F. Downspout Extenders: Same material and finish as downspouts.
- G. Seal metal joints.

#### **2.4. ACCESSORIES**

- A. Fasteners: Galvanized steel, with soft neoprene washers.
- B. Primer: Zinc chromate type.
- C. Concealed Sealants: Non-curing butyl sealant.
- D. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.
- E. Plastic Cement: ASTM D4586/D4586M, Type I.
- F. Reglets: Surface mounted type, galvanized steel; face and ends covered with plastic tape.

### **PART 3 EXECUTION**

#### **3.1. EXAMINATION**

- A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.
- B. Verify roofing termination and base flashings are in place, sealed, and secure.

#### **3.2. PREPARATION**

- A. Install starter and edge strips, and cleats before starting installation.
- B. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil (0.4 mm).

#### **3.3. INSTALLATION**

- A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted..
- B. Apply plastic cement compound between metal flashings and felt flashings.
- C. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- D. Secure gutters and downspouts in place with concealed fasteners.
- E. Set splash pads under downspouts.

### **3.4. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for field inspection requirements.

**END OF SECTION**

## **SECTION 07 7100 - ROOF SPECIALTIES**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Manufactured roof specialties, including copings, fascias, and gravel stops.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 07 7200 - Roof Accessories: Manufactured curbs, roof hatches, and snow guards.

#### **1.3. REFERENCE STANDARDS**

- A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).
- B. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.
- C. ANSI/SPRI/FM 4435/ES-1 - Test Standard for Edge Systems Used with Low Slope Roofing Systems; 2017.
- D. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.
- E. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2014.
- F. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2013.
- G. NRCA (RM) - The NRCA Roofing Manual; 2018.
- H. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on shape of components, materials and finishes, anchor types and locations.
- C. Shop Drawings: Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected work.

### **PART 2 PRODUCTS**

#### **2.1. MANUFACTURERS**

- A. Roof Edge Flashings and Copings:
  - 1. Architectural Products Co; \_\_\_\_: [www.archprod.com/#sle](http://www.archprod.com/#sle).
  - 2. Metal-Era Inc; \_\_\_\_: [www.metalera.com/#sle](http://www.metalera.com/#sle).
  - 3. Substitutions: See Section 01 6000 - Product Requirements.

- B. Pipe and Penetration Flashings:
  - 1. Portals Plus; \_\_\_\_: [www.portalsplus.com/#sle](http://www.portalsplus.com/#sle).
  - 2. Substitutions: See Section 01 6000 - Product Requirements.

## **2.2. COMPONENTS**

- A. Roof Edge Flashings: Factory fabricated to sizes required; mitered, welded corners; concealed fasteners.
  - 1. Configuration: Fascia, cant, and edge securement for roof membrane.
  - 2. Pull-Off Resistance: Tested in accordance with ANSI/SPRI/FM 4435/ES-1 using test methods RE-1 and RE-2 to positive and negative design wind pressure as defined by applicable local building code.
  - 3. Material: Formed steel sheet, galvanized, 24 gage, 0.024 inch (0.6 mm) thick, minimum.
  - 4. Finish: 70 percent polyvinylidene fluoride.
  - 5. Color: As indicated on drawings.
- B. Copings: Factory fabricated to sizes required; mitered, welded corners; concealed fasteners.
  - 1. Configuration: Concealed continuous hold down cleat at both legs; internal splice piece at joints of same material, thickness and finish as cap; concealed stainless steel fasteners.
  - 2. Pull-Off Resistance: Tested in accordance with ANSI/SPRI/FM 4435/ES-1 using test method RE-3 to positive and negative design wind pressure as defined by applicable local building code.
  - 3. Material: Formed steel sheet, galvanized, 24 gage, 0.024 inch (0.6 mm) thick, minimum.
  - 4. Finish: 70 percent polyvinylidene fluoride.
  - 5. Color: As indicated on drawings.
- C. Pipe and Penetration Flashing: Base of rounded aluminum, compatible with sheet metal roof systems, and capable of accomodating pipes sized between 3/8 inch (9.5 mm) and 12 inch (305 mm).
  - 1. Caps: EPDM.
  - 2. Color: Match Roof color.

## **2.3. FINISHES**

- A. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system; color as indicated.

## **2.4. ACCESSORIES**

- A. Sealant for Joints in Linear Components: As recommended by component manufacturer.
- B. Adhesive for Anchoring to Roof Membrane: Compatible with roof membrane and approved by roof membrane manufacturer.

## **PART 3 EXECUTION**

### **3.1. INSTALLATION**

- A. Install components in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.

**END OF SECTION**





## **SECTION 07 7200 - ROOF ACCESSORIES**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Curbs.
- B. Equipment rails.
- C. Roof penetrations mounting curbs.
- D. Non-penetrating pedestals.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 07 7123 - Manufactured Gutters and Downspouts.

#### **1.3. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used.
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
  - 4. Maintenance requirements.
- C. Shop Drawings: Submit detailed layout developed for this project and provide dimensioned location and number for each type of roof accessory.
- D. Warranty Documentation:
  - 1. Submit manufacturer warranty.
  - 2. Ensure that forms have been completed in Owner's name and registered with manufacturer.

#### **1.4. DELIVERY, STORAGE, AND HANDLING**

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store products under cover and elevated above grade.

#### **1.5. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

### **PART 2 PRODUCTS**

#### **2.1. ROOF CURBS**

- A. Roof Curbs Mounting Assemblies: Factory fabricated hollow sheet metal construction, internally reinforced, and capable of supporting superimposed live and dead loads and designated equipment load with fully mitered and sealed corner joints welded or

mechanically fastened, and integral counterflashing with top and edges formed to shed water.

1. Applications: Roof curbs used for roof penetrations/openings as indicated on drawings.
  2. Roof Curb Mounting Substrate: Curb substrate consists of exposed fastener metal roof panel system with rigid insulation flute filler.
  3. Sheet Metal Material:
    - a. Aluminum: 0.080 inch (2.03 mm) minimum thickness, with 3003 alloy, and H14 temper.
      - 1) Finish: Mill finish.
  4. Fabricate curb bottom and mounting flanges for installation directly on metal roof panel system to match slope and configuration of system.
    - a. Extend side flange to next adjacent roof panel seam and comply with seam configurations and seal connection, providing at least 6 inch (152 mm) clearance between curb and metal roof panel flange allowing water to properly flow past curb.
    - b. Where side of curb aligns with metal roof panel flange, attach fasteners on upper slope of flange to curb connection allowing water to flow past below fasteners, and seal connection.
    - c. Maintain at least 12 inch (305 mm) clearance from curb, and lap upper curb flange on underside of down sloping metal roof panel, and seal connection.
    - d. Lap lower curb flange overtop of down sloping metal roof panel and seal connection.
  5. Provide layouts and configurations indicated on drawings.
- B. Curbs Adjacent to Roof Openings: Provide curb on each side of opening, with top of curb horizontal for equipment mounting.
1. Provide preservative treated wood nailers along top of curb.
  2. Insulate inside curbs with 1-1/2 inch (38 mm) thick fiberglass insulation.
  3. Height Above Finished Roof Surface: 8 inches (203 mm), minimum.
- C. Equipment Rail Curbs: Straight curbs on each side of equipment, with top of curbs horizontal and level with each other for equipment mounting.
1. Provide preservative treated wood nailers along top of rails.
  2. Height Above Finished Roof Surface: 8 inches (203 mm), minimum.
- D. Equipment Support: Straight curbs on each side of equipment, with top of curbs parallel with metal roofing system and each other for equipment mounting.
- E. Pipe, Duct, or Conduit Mounting Curbs: Vertical posts, minimum 8 inches (400 mm) square unless otherwise indicated.
1. Provide preservative treated wood nailers over entire top surface, for supports that are provided by others.
  2. Height Above Finished Roof Surface: 8 inches (203 mm), minimum.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Do not begin installation until substrates have been properly prepared.

- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### **3.2. PREPARATION**

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using methods recommended by manufacturer for achieving acceptable results for applicable substrate under project conditions.

### **3.3. INSTALLATION**

- A. Install in accordance with manufacturer's instructions, in manner that maintains roofing system weather-tight integrity.

### **3.4. CLEANING**

- A. Clean installed work to like-new condition.

### **3.5. PROTECTION**

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

### **END OF SECTION**



## **SECTION 07 9200 - JOINT SEALANTS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Nonsag gunnable joint sealants.
- B. Self-leveling pourable joint sealants.
- C. Joint backings and accessories.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions: Additional requirements for sealants and primers.
- B. Section 07 1300 - Sheet Waterproofing: Sealing cracks and joints in waterproofing substrate surfaces using materials specified in this section.
- C. Section 07 2500 - Weather Barriers: Sealants required in conjunction with air barriers and vapor retarders.
- D. Section 08 7100 - Door Hardware: Setting exterior door thresholds in sealant.
- E. Section 08 8000 - Glazing: Glazing sealants and accessories.
- F. Section 09 2116 - Gypsum Board Assemblies: Sealing acoustical and sound-rated walls and ceilings.

#### **1.3. REFERENCE STANDARDS**

- A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2015.
- B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- C. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016.
- D. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2008 (Reapproved 2012).
- E. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants; 2018.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
  - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
  - 2. List of backing materials approved for use with the specific product.
  - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
  - 4. Substrates the product should not be used on.

- C. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.

#### **1.5. QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years experience.

#### **1.6. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a five year period after Date of Substantial Completion.
- C. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

### **PART 2 PRODUCTS**

#### **2.1. MANUFACTURERS**

- A. Non-Sag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.
  - 1. Bostik Inc; \_\_\_\_: [www.bostik-us.com/#sle](http://www.bostik-us.com/#sle).
  - 2. Hilti, Inc; \_\_\_\_: [www.us.hilti.com/#sle](http://www.us.hilti.com/#sle).
  - 3. Sika Corporation; \_\_\_\_: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
  - 4. Tremco Commercial Sealants & Waterproofing; \_\_\_\_: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
  - 5. W.R. Meadows, Inc; \_\_\_\_: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
  - 6. Substitutions: See Section 01 6000 - Product Requirements.
- B. Self-Leveling Sealants: Pourable or self-leveling sealant that has sufficient flow to form a smooth, level surface when applied in a horizontal joint.
  - 1. Bostik Inc; \_\_\_\_: [www.bostik-us.com/#sle](http://www.bostik-us.com/#sle).
  - 2. Sika Corporation; \_\_\_\_: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
  - 3. Tremco Commercial Sealants & Waterproofing; \_\_\_\_: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
  - 4. W.R. Meadows, Inc; \_\_\_\_: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
  - 5. Substitutions: See Section 01 6000 - Product Requirements.

#### **2.2. JOINT SEALANT APPLICATIONS**

- A. Scope:
  - 1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
    - a. Wall expansion and control joints.
    - b. Joints between door, window, and other frames and adjacent construction.
    - c. Joints between different exposed materials.
    - d. Openings below ledge angles in masonry.
    - e. Other joints indicated below.

2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
  - a. Joints between door, window, and other frames and adjacent construction.
  - b. Other joints indicated below.
3. Do not seal the following types of joints.
  - a. Intentional weepholes in masonry.
  - b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
  - c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
  - d. Joints where installation of sealant is specified in another section.
  - e. Joints between suspended panel ceilings/grid and walls.
- B. Exterior Joints: Use non-sag non-staining silicone sealant, unless otherwise indicated.
- C. Interior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.

### **2.3. JOINT SEALANTS - GENERAL**

- A. Sealants and Primers: Provide products with levels of volatile organic compound (VOC) content as indicated in Section 01 6116.

### **2.4. NONSAG JOINT SEALANTS**

- A. Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
  1. Non-Staining To Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
  2. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
  3. Hardness Range: 15 to 35, Shore A, when tested in accordance with ASTM C661.
  4. Color: Match adjacent finished surfaces.
  5. Cure Type: Single-component, neutral moisture curing.
  6. Service Temperature Range: Minus 65 to 180 degrees F (Minus 54 to 82 degrees C).
  7. Manufacturers:
    - a. Sika Corporation; Sikasil WS-290: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
    - b. Sika Corporation; Sikasil WS-295: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
    - c. Sika Corporation; Sikasil 728NS: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
    - d. Tremco Commercial Sealants & Waterproofing; Spectrem 1: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
    - e. Tremco Commercial Sealants & Waterproofing; Spectrem 2: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
    - f. Tremco Commercial Sealants & Waterproofing; Spectrem 3: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
- B. Polymer Sealant: ASTM C920; single component, cured sealant is paintable and mold/mildew resistant, low odor and VOC, and ultraviolet (UV) resistant.
  1. Color: White.
- C. Type \_\_\_\_ - Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; not expected to withstand continuous water immersion or traffic.

1. Movement Capability: Plus and minus 25 percent, minimum.
2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661.
3. Color: Match adjacent finished surfaces.
4. Service Temperature Range: Minus 40 to 180 degrees F (Minus 40 to 82 degrees C).
5. Manufacturers:
  - a. Sika Corporation; Sikaflex-1a: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
  - b. Sika Corporation; Sikaflex-15 LM: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
  - c. Sika Corporation; Sikaflex-2c NS: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
  - d. Tremco Commercial Sealants & Waterproofing; Dymeric 240 FC: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
  - e. W. R. Meadows, Inc; POURTHANE NS: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).

## 2.5. SELF-LEVELING SEALANTS

- A. Self-Leveling Silicone Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent, explicitly approved by manufacturer for traffic exposure when recessed below traffic surface; not expected to withstand continuous water immersion.
  1. Movement Capability: Plus 100 percent, minus 50 percent, minimum.
  2. Hardness Range: 0 to 15, Shore A, when tested in accordance with ASTM C661.
  3. Manufacturers:
    - a. Sika Corporation; Sikasil 728RCS: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
    - b. Sika Corporation; Sikasil 728SL: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
    - c. \_\_\_\_\_.
- B. Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multi-component; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion .
  1. Movement Capability: Plus and minus 25 percent, minimum.
  2. Hardness Range: 35 to 55, Shore A, when tested in accordance with ASTM C661.
  3. Color: To be selected by Architect from manufacturer's standard range.
  4. Manufacturers:
    - a. Sika Corporation; Sikaflex-1c SL: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
    - b. Sika Corporation; Sikaflex-2c SL: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
    - c. Substitutions: See Section 01 6000 - Product Requirements.
- C. Self-Leveling Polyurethane Sealant for Horizontal Expansion Joints: ASTM C920, Grade P, Uses T, M and O; multi-component; explicitly approved by manufacturer for horizontal expansion joints.
  1. Movement Capability: Plus and minus 25 percent, minimum.
  2. Hardness Range: 30 to 35, Shore A, when tested in accordance with ASTM C661.
  3. Color: To be selected by Architect from manufacturer's standard range.
  4. Manufacturers:
    - a. Tremco Commercial Sealants & Waterproofing; THC-901: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
    - b. Substitutions: See Section 01 6000 - Product Requirements.
- D. Self-Leveling Polyurethane Sealant for Continuous Water Immersion: Polyurethane; ASTM C920, Grade P, Uses M and A; single or multi-component; explicitly approved by manufacturer for traffic exposure and continuous water immersion.



1. Movement Capability: Plus and minus 25 percent, minimum.
2. Color: To be selected by Architect from manufacturer's standard range.
3. Manufacturers:
  - a. Sika Corporation; Sikaflex-1c SL: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
  - b. Sika Corporation; Sikaflex-2c SL: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
  - c. W. R. MEADOWS, Inc; POURTHANE SL: [www.wrmeadows.com/#sle](http://www.wrmeadows.com/#sle).
  - d. Substitutions: See Section 01 6000 - Product Requirements.

## **2.6. ACCESSORIES**

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
  1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type O - Open Cell Polyurethane.
  2. Type for Joints Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type B - Bi-Cellular Polyethylene.
  3. Open Cell: 40 to 50 percent larger in diameter than joint width.
  4. Closed Cell and Bi-Cellular: 25 to 33 percent larger in diameter than joint width.
  5. Manufacturers:
    - a. Nomaco, Inc; HBR: [www.nomaco.com/#sle](http://www.nomaco.com/#sle).
    - b. Substitutions: See Section 01 6000 - Product Requirements.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
- D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- E. Primers: Type recommended by sealant manufacturer to suit application; non-staining.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

### **3.2. PREPARATION**

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

### **3.3. INSTALLATION**

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Install bond breaker backing tape where backer rod cannot be used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- E. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- F. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

### **3.4. POST-OCCUPANCY**

- A. Post-Occupancy Inspection: Perform visual inspection of entire length of project sealant joints at a time that joints have opened to their greatest width; i.e. at low temperature in thermal cycle. Report failures immediately and repair.

**END OF SECTION**

## **SECTION 08 0671 - DOOR HARDWARE SCHEDULE**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Preliminary schedule of door hardware sets for swinging as indicated on drawings.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 08 7100 - Door Hardware: Requirements to comply with in coordination with this section.

#### **1.3. REFERENCE STANDARDS**

- A. BHMA (CPD) - Certified Products Directory; 2017.
- B. BHMA A156.3 - American National Standard for Exit Devices; 2014.
- C. BHMA A156.5 - American National Standard for Cylinders and Input Devices for Locks; 2014.
- D. BHMA A156.13 - American National Standard for Mortise Locks & Latches Series 1000; 2017.
- E. BHMA A156.18 - American National Standard for Materials and Finishes; 2016.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

### **PART 2 PRODUCTS**

#### **2.1. MANUFACTURERS**

- A. Obtain each type of door hardware as indicated from a single manufacturer and single supplier.

#### **2.2. DESCRIPTION**

- A. Door hardware sets provided represent the design intent, they are only a guideline and should not be considered a detailed or complete hardware schedule.
  - 1. Provide door hardware item(s) as required for similar purposes, even when item is not listed for a door in Door Hardware Schedule.
  - 2. Necessary items that are not included in a Hardware Set should be added and have the appropriate additional hardware as required for proper application and functionality.
  - 3. Door hardware supplier is responsible for providing proper size and hand of door for products required in accordance with Door Hardware Schedule and as indicated on drawings.
  - 4. Quantities listed are for each Pair (PR) of doors, or for each Single (SGL) door, as indicated in hardware sets.

### 2.3. LOCK FUNCTION CODES

- A. Function Codes for Cylindrical Locks: Complying with BHMA A156.5.
- B. Function Codes for Mortise Locks: Complying with BHMA A156.13.
- C. Function Codes for Exit Devices: Complying with BHMA A156.3.

### 2.4. FINISHES

- A. Finishes: Complying with BHMA A156.18.
  - 1. Code 604: Zinc plated and dichromate sealed, with steel base material.
  - 2. Code 626: Satin chromium plated over nickel, with brass or bronze base material (former US equivalent US26D).
  - 3. Code 630: Satin stainless steel, with stainless steel 300 series base material (former US equivalent US32D).
  - 4. Code 652: Satin chromium plated over nickel, with steel base material (former US equivalent US26D).
  - 5. Code 689: Aluminum painted, with any base material (former US equivalent US28).

## PART 3 EXECUTION

### 3.1. DOOR HARDWARE SCHEDULE

#### 3.2. HARDWARE SET # 01: "DOOR #107"

- A. For use on Door Number(s): #107.
- B. Provide for each Single (SGL) door(s).

<u>UNITS</u>	<u>LOCK</u>	<u>ITEM</u>	<u>DESCRIPTION</u>	<u>FINISH</u>	<u>MFR</u>
3		HINGES	5BB1 4 1/2 X 4 1/2 NRP	652	IV
1		EXIT DEVICE	98L x 996L-R&V 06	US32D, US26D	VO
1		RIM CYLINDER	20-057	626	SC
1		CLOSER	4111 SHCUSH	ALUM	LC
1		KICKPLATE	8400 10" x 34"	US32D	IV
1		FLOOR STOP	1233	626	TR
1		WEATHERSTOP	PS074 1 x 36" 2x 84"	BLACK	VA01
1		DOOR BOTTOM	315 CN 36"		PE
1		THRESHOLD	273 x 3 AFG 36"		PE

END OF SECTION





## **SECTION 08 1113 - HOLLOW METAL DOORS AND FRAMES**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Non-fire-rated hollow metal doors and frames.
- B. Thermally insulated hollow metal doors with frames.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 08 7100 - Door Hardware.
- B. Section 08 8000 - Glazing: Glass for doors and borrowed lites.
- C. Section 09 9113 - Exterior Painting: Field painting.
- D. Section 09 9123 - Interior Painting: Field painting.

#### **1.3. ABBREVIATIONS AND ACRONYMS**

- A. ANSI: American National Standards Institute.
- B. ASCE: American Society of Civil Engineers.
- C. HMMA: Hollow Metal Manufacturers Association.
- D. NAAMM: National Association of Architectural Metal Manufacturers.
- E. NFPA: National Fire Protection Association.
- F. SDI: Steel Door Institute.
- G. UL: Underwriters Laboratories.

#### **1.4. REFERENCE STANDARDS**

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2011.
- C. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames; 2003 (R2009).
- D. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2017.
- E. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2011.
- F. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- G. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable; 2018.

- H. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2018a.
- I. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2018b.
- J. BHMA A156.115 - American National Standard for Hardware Preparation in Steel Doors and Steel Frames; 2016.
- K. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
- L. NAAMM HMMA 805 - Recommended Selection and Usage Guide for Hollow Metal Doors and Frames; 2012.
- M. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames; 2002.
- N. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames; 2011.
- O. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; 2007.
- P. SDI 117 - Manufacturing Tolerances for Standard Steel Doors and Frames; 2013.
- Q. UL 1784 - Standard for Air Leakage Tests of Door Assemblies; Current Edition, Including All Revisions.

#### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.
- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.
- D. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.

#### **1.6. QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Provide hollow metal doors and frames from SDI Certified manufacturer: [www.steeldoor.org/sdicertified.php/#sle](http://www.steeldoor.org/sdicertified.php/#sle).
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of experience.

#### **1.7. DELIVERY, STORAGE, AND HANDLING**

- A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.



## **PART 2 PRODUCTS**

### **2.1. MANUFACTURERS**

#### **A. Hollow Metal Doors and Frames:**

1. Ceco Door, an Assa Abloy Group company; \_\_\_\_: [www.assaabloydss.com/#sle](http://www.assaabloydss.com/#sle).
2. Curries, an Assa Abloy Group company; \_\_\_\_: [www.assaabloydss.com/#sle](http://www.assaabloydss.com/#sle).
3. Republic Doors, an Allegion brand; \_\_\_\_: [www.republicdoor.com/#sle](http://www.republicdoor.com/#sle).
4. Steelcraft, an Allegion brand; \_\_\_\_: [www.allegion.com/#sle](http://www.allegion.com/#sle).
5. Substitutions: See Section 01 6000 - Product Requirements.

### **2.2. PERFORMANCE REQUIREMENTS**

#### **A. Requirements for Hollow Metal Doors and Frames:**

1. Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
2. Accessibility: Comply with ICC A117.1 and ADA Standards.
3. Exterior Door Top Closures: Flush end closure channel, with top and door faces aligned.
4. Door Edge Profile: Manufacturers standard for application indicated.
5. Typical Door Face Sheets: Flush.
6. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Manufacturers standard.
7. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

### **2.3. HOLLOW METAL DOORS**

#### **A. Door Finish: Factory primed and field finished.**

#### **B. Exterior Doors: Thermally insulated.**

1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
  - a. Level 2 - Heavy-duty.
  - b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
  - c. Model 1 - Full Flush.
  - d. Door Face Metal Thickness: 18 gage, 0.042 inch (1.0 mm), minimum.
  - e. Zinc Coating: A60/ZF180 galvanized coating; ASTM A653/A653M.
2. Door Core Material: Vertical steel stiffeners with fiberglass batts.
  - a. Foam Plastic Insulation: Manufacturer's standard board insulation with maximum flame spread index (FSI) of 75, and maximum smoke developed index (SDI) of 450 in accordance with ASTM E84, and completely enclosed within interior of door.
3. Door Thermal Resistance: R-Value of 2.67 Min..

4. Door Thickness: 1-3/4 inch (44.5 mm), nominal.
5. Weatherstripping: Refer to Section 08 7100.

#### **2.4. HOLLOW METAL FRAMES**

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Frame Finish: Factory primed and field finished.
- C. Exterior Door Frames: Full profile/continuously welded type.
  1. Frame Metal Thickness: 16 gage, 0.053 inch (1.3 mm), minimum.
  2. Weatherstripping: Separate, see Section 08 7100.

#### **2.5. FINISHES**

- A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.
- B. Bituminous Coating: Asphalt emulsion or other high-build, water-resistant, resilient coating.

#### **2.6. ACCESSORIES**

- A. Glazing: As specified in Section 08 8000.
- B. Removable Stops: Formed sheet steel, shape as indicated on drawings, mitered or butted corners; prepared for countersink style tamper proof screws.
- C. Grout for Frames: Portland cement grout with maximum 4 inch (102 mm) slump for hand troweling; thinner pumpable grout is prohibited.
- D. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.
- E. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

### **PART 3 EXECUTION**

#### **3.1. EXAMINATION**

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

#### **3.2. PREPARATION**

- A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

#### **3.3. INSTALLATION**

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.

- B. Coordinate frame anchor placement with wall construction.
- C. Grout frames in masonry construction, using hand trowel methods; brace frames so that pressure of grout before setting will not deform frames.
- D. Install door hardware as specified in Section 08 7100.
- E. Comply with glazing installation requirements of Section 08 8000.
- F. Touch up damaged factory finishes.

#### **3.4. TOLERANCES**

- A. Maximum Diagonal Distortion: 1/16 inch (1.6 mm) measured with straight edge, corner to corner.

#### **3.5. ADJUSTING**

- A. Adjust for smooth and balanced door movement.

**END OF SECTION**



## **SECTION 08 4229 - AUTOMATIC ENTRANCES**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Packaged power-operated door assemblies of following types:
  - 1. Sliding type. (**ALTERNATE # 7**)
- B. Controllers, actuators and safety devices.
- C. Maintenance.

#### **1.2. DEFINITIONS**

- A. AAADM: American Association of Automatic Door Manufacturers.

#### **1.3. REFERENCE STANDARDS**

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. BHMA A156.10 - American National Standard for Power Operated Pedestrian Doors; 2017.
- C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- D. NFPA 101 - Life Safety Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings:
  - 1. Indicate layout and dimensions; head, jamb, and sill conditions; elevations; components, anchorage, recesses, materials, and finishes, electrical characteristics and connection requirements.
- C. Product Data: Provide data on system components, sizes, features, and finishes.
- D. Maintenance Data: Include manufacturer's parts list and maintenance instructions for each type of hardware and operating component.
- E. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. Wrenches and other tools required for maintenance of equipment.

#### **1.5. QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of experience, and a member of AAADM.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years experience.

## **1.6. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

## **PART 2 PRODUCTS**

### **2.1. MANUFACTURERS**

- A. Sliding Automatic Entrance Door Assemblies:
  - 1. ASSA ABLOY Entrance Solutions; Besam SL500: [www.besam-usa.com/#sle](http://www.besam-usa.com/#sle).
  - 2. Stanley Access Technologies; Dura-Glide 2000 Sliding: [www.stanleyaccess.com/#sle](http://www.stanleyaccess.com/#sle).
    - a. BASIS OF DESIGN. VERIFY EXSITING SLIDING DOOR MAUFACTURER. MATCH EXISTING, IF APPLICABLE..
  - 3. Substitutions: See Section 01 6000 - Product Requirements.

### **2.2. POWER OPERATED DOORS**

- A. Power Operated Doors: Provide products that comply with NFPA 101 and requirements of authorities having jurisdiction; provide equipment selected for actual door weight and for light pedestrian traffic, unless otherwise indicated.
  - 1. Sliding and Folding Door Operators: In the event of power failure, provide for manual open, close, and break-away operation of door leaves.
  - 2. Packaged Door Assemblies: Provide components by single manufacturer, factory-assembled, including doors, frames, operators, actuators, and safeties.
- B. Sliding and Folding Doors with Full Power Operators: Comply with BHMA A156.10; safeties required; provide break-away operation unless otherwise indicated; in the event of break-away operation, interrupt power operation.
  - 1. Force Required to Swing Break-Away Panel: 50 pound-force (220 N), maximum, measured at 1 inch (25 mm) from the latch edge of the door at any point in the closing cycle.
- C. Operators:
  - 1. Electric Operators: 1/4 hp (\_\_\_\_ W) minimum, self-contained, gear driven.

### **2.3. AUTOMATIC ENTRANCE DOOR ASSEMBLIES**

- A. Comply with ADA Standards for egress requirements.
- B. Framing and Transom Members: Provide manufacturer's standard extruded aluminum framing, reinforced as required to support imposed loads.
  - 1. Nominal Sizes:
    - a. Single Slide and Bi-Parting Sliding Doors: 1-3/4 inch (44.5 mm) wide by 4-1/2 inch (114.3 mm) deep.
  - 2. Transoms: Provide flush glazed transom with framing that is integral with automatic entrance framing system.
- C. Door and Sidelight Construction: Heavy duty interlocked extruded aluminum tubular stile and rail sections, through-rod bolted construction with steel corner support at hinge stile

of carrier-suspended swinging panels or mechanically fastened corners with welded reinforcing brackets to reduce sag in sliding or breakout mode.

1. Door Thickness: 1-3/4 inch (44.5 mm), nominal.
  2. Stile Design:
  3. Top Rail Height: 4 inch (102 mm), nominal.
  4. Bottom Rail Height: 4 inch (102 mm), nominal.
  5. Glazing Stops: Manufacturer's standard snap-on extruded aluminum square stops with preformed resilient glazing gaskets.
  6. Glazing Stop Width: Manufacturers standard.
  7. Glazing Thickness: 1/4 inch (6 mm).
- D. Sliding Automatic Door: Single leaf track-mounted, electric operation, extruded aluminum glazed door, with frame, and operator concealed overhead.
1. Operation: Power open, power boost operation.
  2. Exterior-Side Actuator/Safety: Motion sensor.
  3. Interior-Side Actuator/Safety: Motion sensor.
  4. Hold Open: Toggle switch at inside head of doors; this is not a fire-rated door.
  5. Door and Frame Finish: Same as adjacent framing system.

#### **2.4. CONTROLLERS, ACTUATORS, AND SAFETIES**

- A. Controller: Provide microprocessor operated controller for each door.
- B. Comply with BHMA A156.10 for actuator and safety types and zones.

#### **2.5. ELECTRICAL CHARACTERISTICS AND COMPONENTS**

- A. Electrical Characteristics:
  1. 5 rated load amperes.
  2. 120 volts, single phase, 60 Hz.
  3. 5 amperes maximum fuse size.
- B. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Enclose terminal lugs in terminal box sized to NFPA 70.
- C. Disconnect Switch: Factory mount disconnect switch in control panel.

### **PART 3 EXECUTION**

#### **3.1. EXAMINATION**

- A. Verify that surfaces are ready to receive work and dimensions are as indicated on shop drawings.
- B. Verify that electric power is available and is of the correct characteristics.

#### **3.2. INSTALLATION**

- A. Install equipment in accordance with manufacturer's instructions.

**3.3. ADJUSTING**

- A. Adjust door equipment for correct function and smooth operation.

**3.4. CLEANING**

- A. Remove temporary protection, clean exposed surfaces.

**3.5. CLOSEOUT ACTIVITIES**

- A. Demonstrate operation, operating components, adjustment features, and lubrication requirements.

**3.6. MAINTENANCE**

- A. See Section 01 7000 - Execution and Closeout Requirements, for additional requirements relating to maintenance service.
- B. Provide service and maintenance of operating equipment for one year from Date of Substantial Completion, at no extra charge to Owner.

**END OF SECTION**



## **SECTION 08 4313 - ALUMINUM-FRAMED STOREFRONTS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Aluminum-framed storefront, with vision glass.
- B. Infill insulated panels of metal.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 07 9200 - Joint Sealants: Sealing joints between frames and adjacent construction.
- B. Section 08 4229 - Automatic Entrances.
- C. Section 08 8000 - Glazing: Glass and glazing accessories.

#### **1.3. REFERENCE STANDARDS**

- A. AAMA CW-10 - Care and Handling of Architectural Aluminum From Shop to Site; 2015.
- B. AAMA 501.2 - Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems; 2015.
- C. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document); 2015.
- D. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).
- E. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.
- F. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric); 2014.
- G. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2014.
- H. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2013.

#### **1.4. ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate with installation of other components that comprise the exterior enclosure.

#### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware, and internal drainage details.
- C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related work, expansion and contraction joint location and details, and field welding required.

- D. Samples: Submit two samples illustrating finished aluminum surface, glass, infill panels, glazing materials.
- E. Design Data: Provide framing member structural and physical characteristics, engineering calculations, and dimensional limitations.
- F. Field Quality Control Submittals: Report of field testing for water penetration and air leakage.
- G. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

#### **1.6. QUALITY ASSURANCE**

- A. Designer Qualifications: Design structural support framing components under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed in the State in which the Project is located.
- B. Manufacturer Qualifications: Company specializing in performing work of type specified and with at least three years of experience.
- C. Installer Qualifications: Company specializing in performing work of type specified and with at least three years of experience.

#### **1.7. DELIVERY, STORAGE, AND HANDLING**

- A. Handle products of this section in accordance with AAMA CW-10.
- B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

#### **1.8. FIELD CONDITIONS**

- A. Do not install sealants when ambient temperature is less than 40 degrees F (5 degrees C). Maintain this minimum temperature during and 48 hours after installation.

#### **1.9. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

### **PART 2 PRODUCTS**

#### **2.1. BASIS OF DESIGN -- FRAMING FOR INSULATING GLAZING**

- A. Center-Set Style, Thermally-Broken:
  - 1. Basis of Design: Kawneer Trifab VersaGlaze 451T Framing System.
  - 2. Vertical Mullion Dimensions: 2 inches wide by 4-1/2 inches deep (51 mm wide by 114 mm deep).
- B. Other Manufacturers: Provide either the product identified as "Basis of Design" or an equivalent product of one of the manufacturers listed below:
  - 1. C.R. Laurence Company, Inc; U.S. Aluminum; : [www.crl-arch.com/#sle](http://www.crl-arch.com/#sle).
  - 2. EFCO Corporation; [www.efcocorp.com](http://www.efcocorp.com).
  - 3. Oldcastle Building Envelope; [www.obe.com](http://www.obe.com).

- 4. Arcadia; [www.arcadiainc.com](http://www.arcadiainc.com).
- C. Substitutions: See Section 01 6000 - Product Requirements.

## **2.2. STOREFRONT**

- A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
  - 1. Glazing Rabbet: For 1 inch (25 mm) insulating glazing.
  - 2. Finish: Class I natural anodized.
    - a. Factory finish all surfaces that will be exposed in completed assemblies.
  - 3. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors and hardware; fasteners and attachments concealed from view; reinforced as required for imposed loads.
  - 4. Construction: Eliminate noises caused by wind and thermal movement, prevent vibration harmonics, and prevent "stack effect" in internal spaces.
  - 5. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
  - 6. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F (95 degrees C) over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.
  - 7. Movement: Allow for movement between storefront and adjacent construction, without damage to components or deterioration of seals.
  - 8. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.

## **2.3. COMPONENTS**

- A. Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.
  - 1. Glazing Stops: Flush.
  - 2. Cross-Section: As indicated on drawings.
- B. Glazing: As specified in Section 08 8000.
- C. Infill Panels: Insulated, aluminum sheet face and back, with edges formed to fit glazing channel and sealed.
  - 1. Citadel Architectural Products; GlazeGuard 1000WR+
    - a. Face Sheet: .024 inch ( mm) thick. Smooth Aluminum
    - b. Core: ISO insulation core with R-value of 6.13 (RSI-value of ). 11/16" Polyisocyanurate
    - c. Back Sheet: 0.24 inch ( mm) thick. Smooth Aluminum
    - d. Exterior Finish: Class I natural anodized.
    - e. Interior Finish: Same as exterior finish.

## **2.4. MATERIALS**

- A. Extruded Aluminum: ASTM B221 (ASTM B221M).

- B. Sheet Aluminum: ASTM B209 (ASTM B209M).
- C. Fasteners: Stainless steel.
- D. Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.

## **2.5. FINISHES**

- A. Class I Natural Anodized Finish: AAMA 611 AA-M12C22A41 Clear anodic coating not less than 0.7 mils (0.018 mm) thick.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify dimensions, tolerances, and method of attachment with other work.
- B. Verify that wall openings and adjoining air and vapor seal materials are ready to receive work of this section.

### **3.2. INSTALLATION**

- A. Install wall system in accordance with manufacturer's instructions.
- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- E. Provide thermal isolation where components penetrate or disrupt building insulation.
- F. Install sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam.
- G. Where fasteners penetrate sill flashings, make watertight by seating and sealing fastener heads to sill flashing.
- H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- I. Install glass and infill panels in accordance with Section 08 8000, using glazing method required to achieve performance criteria.
- J. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

### **3.3. TOLERANCES**

- A. Maximum Variation from Plumb: 0.06 inch per 3 feet (1.5 mm per m) non-cumulative or 0.06 inch per 10 feet (1.5 mm per 3 m), whichever is less.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch (0.8 mm).

### **3.4. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for general testing and inspection requirements.
- B. Water-Spray Test: Provide water spray quality test of installed storefront components in accordance with AAMA 501.2 during construction process and before installation of interior finishes.
  - 1. Perform a minimum of two tests in each designated area as indicated on drawings.
  - 2. Conduct tests in each area prior to 10 percent and 50 percent completion of this work.
- C. Repair or replace storefront components that have failed designated field testing, and retest to verify performance conforms to specified requirements.

### **3.5. CLEANING**

- A. Remove protective material from pre-finished aluminum surfaces.
- B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths, and take care to remove dirt from corners and to wipe surfaces clean.
- C. Upon completion of installation, thoroughly clean aluminum surfaces in accordance with AAMA 609 & 610.

### **3.6. PROTECTION**

- A. Protect installed products from damage until Date of Substantial Completion.

### **END OF SECTION**



## **SECTION 08 7100 - DOOR HARDWARE**

### **PART 1 GENERAL**

#### **1.1. RELATED REQUIREMENTS**

- A. Section 08 0671 - Door Hardware Schedule: Schedule of door hardware sets.
- B. Section 08 1113 - Hollow Metal Doors and Frames.

#### **1.2. REFERENCE STANDARDS**

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. BHMA (CPD) - Certified Products Directory; 2017.
- C. BHMA A156.1 - American National Standard for Butts and Hinges; 2016.
- D. BHMA A156.3 - American National Standard for Exit Devices; 2014.
- E. BHMA A156.4 - American National Standard for Door Controls - Closers; 2013.
- F. BHMA A156.5 - American National Standard for Cylinders and Input Devices for Locks; 2014.
- G. BHMA A156.6 - American National Standard for Architectural Door Trim; 2015.
- H. BHMA A156.8 - American National Standard for Door Controls - Overhead Stops and Holders; 2015.
- I. BHMA A156.13 - American National Standard for Mortise Locks & Latches Series 1000; 2017.
- J. BHMA A156.21 - American National Standard for Thresholds; 2014.
- K. BHMA A156.22 - American National Standard for Door Gasketing and Edge Seal Systems, Builders Hardware Manufacturers Association; 2017.
- L. BHMA A156.115 - American National Standard for Hardware Preparation in Steel Doors and Steel Frames; 2016.
- M. DHI (KSN) - Keying Systems and Nomenclature; 1989.
- N. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; 2004.
- O. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

#### **1.3. ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.
- B. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.
- C. Keying Requirements Meeting:
  - 1. Attendance Required:
    - a. Contractor.
    - b. Owner.
    - c. Installer's Architectural Hardware Consultant (AHC).

- d. Hardware Installer.
- 2. Agenda:
  - a. Verify locksets and locking hardware are functionally correct for project requirements.
  - b. Verify that keying and programming complies with project requirements.
- 3. Incorporate "Keying Requirements Meeting" decisions into keying submittal upon review of door hardware keying system including, but not limited to, the following:
- 4. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.
- 5. Deliver established keying requirements to manufacturers.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.
- C. Shop Drawings - Door Hardware Schedule: Submit detailed listing that includes each item of hardware to be installed on each door. Use door numbering scheme as included in Contract Documents.
  - 1. Prepared by or under supervision of Architectural Hardware Consultant (AHC).
  - 2. Provide complete description for each door listed.
- D. Keying Schedule:
  - 1. Submit three (3) copies of Keying Schedule in compliance with requirements established during Keying Requirements Meeting unless otherwise indicated.

#### **1.5. QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years of experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified for commercial door hardware with at least three years of experience.

#### **1.6. DELIVERY, STORAGE, AND HANDLING**

- A. Package hardware items individually; label and identify each package with door opening code to match door hardware schedule.

#### **1.7. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Warranty against defects in material and workmanship for period indicated, from Date of Substantial Completion.
  - 1. Locksets and Cylinders: Three years, minimum.
  - 2. Other Hardware: Two years, minimum.



## **PART 2 PRODUCTS**

### **2.1. DESIGN AND PERFORMANCE CRITERIA**

- A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.
- B. Provide individual items of single type, of same model, and by same manufacturer.
- C. Provide door hardware products that comply with the following requirements:
  - 1. Applicable provisions of federal, state, and local codes.
  - 2. Accessibility: ADA Standards and ICC A117.1.
  - 3. Hardware Preparation for Steel Doors and Steel Frames: BHMA A156.115.
- D. Lock Function: Provide lock and latch function numbers and descriptions of manufacturer's series. Refer to Section 08 0671 for listing of hardware sets.
- E. Fasteners:
  - 1. Provide fasteners of proper type, size, quantity, and finish that comply with commercially recognized standards for proposed applications.
    - a. Aluminum fasteners are not permitted.
    - b. Provide phillips flat-head screws with heads finished to match door surface hardware unless otherwise indicated.

### **2.2. HINGES**

- A. Manufacturers:
  - 1. Basis of Design: IVES.
  - 2. Substitutions: See Section 01 6000 - Product Requirements.
- B. Hinges: Comply with BHMA A156.1, Grade 1.
  - 1. Provide hinges on every swinging door.
  - 2. Provide five-knuckle full mortise butt hinges unless otherwise indicated.
  - 3. Provide non-removable pins on exterior outswinging doors.
  - 4. Provide following quantity of butt hinges for each door:
    - a. Doors From 60 inches (1.5 m) High up to 90 inches (2.3 m) High: Three hinges.

### **2.3. EXIT DEVICES**

- A. Manufacturers:
  - 1. Basis of Design: \_\_\_\_\_.
  - 2. Substitutions: Not permitted.
- B. Exit Devices: Comply with BHMA A156.3, Grade 1.
  - 1. Lever design to match lockset trim.
  - 2. Provide cylinder with cylinder dogging or locking trim.
  - 3. Provide exit devices properly sized for door width and height.
  - 4. Provide strike as recommended by manufacturer for application indicated.
  - 5. Provide UL (DIR) listed exit device assemblies for fire-rated doors and panic device assemblies for non-fire-rated doors.

## **2.4. MORTISE LOCKS**

- A. Manufacturers:
  - 1. Basis of Design: \_\_\_\_\_.
  - 2. Substitutions: See Section 01 6000 - Product Requirements.
- B. Mortise Locks: Comply with BHMA A156.13, Grade 1, Security, 1000 Series.
  - 1. Latchbolt Throw: 3/4 inch (19 mm), minimum.
  - 2. Deadbolt Throw: 1 inch (25.4 mm), minimum.
  - 3. Backset: 2-3/4 inch (70 mm) unless otherwise indicated.
  - 4. Strikes: Provide manufacturer's standard strike for each latchset or lockset with strike box and curved lip extending to protect frame in compliance with indicated requirements.
    - a. Finish: To match lock or latch.

## **2.5. CLOSERS**

- A. Manufacturers; Surface Mounted:
  - 1. Basis of Design: \_\_\_\_\_.
  - 2. Substitutions: See Section 01 6000 - Product Requirements.
- B. Closers: Comply with BHMA A156.4, Grade 1.
  - 1. Type: Surface mounted to door.
  - 2. Provide door closer on each exterior door.
  - 3. At outswinging exterior doors, mount closer on interior side of door.

## **2.6. OVERHEAD STOPS AND HOLDERS**

- A. Manufacturers:
  - 1. Basis of Design: \_\_\_\_\_.
  - 2. Substitutions: See Section 01 6000 - Product Requirements.
- B. Overhead Stops and Holders (Door Checks): Comply with BHMA A156.8, Grade 1.
  - 1. Provide stop for every swinging door, unless otherwise indicated.

## **2.7. KICK PLATES**

- A. Manufacturers:
  - 1. Basis of Design: \_\_\_\_\_.
  - 2. Ives, an Allegion brand; \_\_\_\_: [www.allegion.com/us/#sle](http://www.allegion.com/us/#sle).
  - 3. Trimco; \_\_\_\_: [www.trimcohardware.com/#sle](http://www.trimcohardware.com/#sle).
  - 4. Substitutions: See Section 01 6000 - Product Requirements.
- B. Kick Plates: Provide along bottom edge of push side of every door with closer, except aluminum storefront and glass entry doors, unless otherwise indicated.
  - 1. Size: 10 inch (\_\_\_\_ mm) high by 2 inch (51 mm) less door width (LDW) on push side of door.

## **2.8. THRESHOLDS**

- A. Manufacturers:

1. Basis of Design: \_\_\_\_\_.
  2. Pemko; an Assa Abloy Group company; \_\_\_\_: [www.assaabloydss.com/#sle](http://www.assaabloydss.com/#sle).
  3. Substitutions: See Section 01 6000 - Product Requirements.
- B. Thresholds: Comply with BHMA A156.21.
1. Provide threshold at each exterior door, unless otherwise indicated.
  2. Type: Flat surface.
  3. Material: Aluminum.
  4. Threshold Surface: Thermally broken.
  5. Field cut threshold to profile of frame and width of door sill for tight fit.
  6. Provide non-corroding fasteners at exterior locations.

## **2.9. WEATHERSTRIPPING AND GASKETING**

- A. Manufacturers:
1. Basis of Design: \_\_\_\_\_.
  2. Pemko; an Assa Abloy Group company; \_\_\_\_: [www.assaabloydss.com/#sle](http://www.assaabloydss.com/#sle).
  3. National Guard Products, Inc; \_\_\_\_: [www.ngpinc.com/#sle](http://www.ngpinc.com/#sle).
  4. Reese Enterprises, Inc; \_\_\_\_: [www.reeseusa.com/#sle](http://www.reeseusa.com/#sle).
  5. Zero International, Inc; \_\_\_\_: [www.zerointernational.com/#sle](http://www.zerointernational.com/#sle).
  6. Substitutions: See Section 01 6000 - Product Requirements.
- B. Weatherstripping and Gasketing: Comply with BHMA A156.22.
1. Head and Jamb Type: Adjustable.
  2. Door Sweep Type: Door shoe with drip cap.
  3. Material: Aluminum, with brush weatherstripping.
  4. Provide weatherstripping on each exterior door at head, jambs, and meeting stiles of door pairs, unless otherwise indicated; .
  5. Provide door bottom sweep on each exterior door, unless otherwise indicated.

## **2.10. FINISHES**

- A. Finishes: Identified in Section 08 0671 - Door Hardware Schedule.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

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

### **3.2. INSTALLATION**

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Use templates provided by hardware item manufacturer.
- C. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list; unless noted otherwise in Door Hardware Schedule or on drawings.
1. For Steel Doors and Frames: Install in compliance with DHI (LOCS) recommendations.

2. Mounting heights in compliance with ADA Standards:
  - a. Locksets: 40-5/16 inch (1024 mm).
  - b. Push Plates/Pull Bars: 42 inch (1067 mm).
  - c. Deadlocks (Deadbolts): 48 inch (1219 mm).
  - d. Exit Devices: 40-5/16 inch (1024 mm).
- D. Set exterior door thresholds with full-width bead of elastomeric sealant at each point of contact with floor providing a continuous weather seal; anchor thresholds with stainless steel countersunk screws.

### **3.3. FIELD QUALITY CONTROL**

- A. Perform field inspection and testing under provisions of Section 01 4000 - Quality Requirements.

### **3.4. ADJUSTING**

- A. Adjust work under provisions of Section 01 7000 - Execution and Closeout Requirements.
- B. Adjust hardware for smooth operation.
- C. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

### **3.5. CLEANING**

- A. Clean finished hardware in accordance with manufacturer's written instructions after final adjustments have been made.
- B. Clean adjacent surfaces soiled by hardware installation.
- C. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost.
- D. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.

### **3.6. PROTECTION**

- A. Protect finished Work under provisions of Section 01 7000 - Execution and Closeout Requirements.
- B. Do not permit adjacent work to damage hardware or finish.

### **END OF SECTION**

## **SECTION 08 8000 - GLAZING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Insulating glass units.
- B. Glazing units.
- C. Insulated Metal Panels.
- D. Glazing compounds and accessories.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 07 9200 - Joint Sealants: Sealants for other than glazing purposes.
- B. Section 08 1113 - Hollow Metal Doors and Frames: Glazed lites in doors.
- C. Section 08 4229 - Automatic Entrances: Glazing furnished as part of door assembly.
- D. Section 08 4313 - Aluminum-Framed Storefronts: Glazing furnished as part of storefront assembly.

#### **1.3. REFERENCE STANDARDS**

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; current edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015.
- C. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- D. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2015).
- E. ASTM C1036 - Standard Specification for Flat Glass; 2016.
- F. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2015.
- G. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2016.
- H. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2010.
- I. GANA (GM) - GANA Glazing Manual; 2008.
- J. GANA (SM) - GANA Sealant Manual; 2008.
- K. GANA (LGRM) - Laminated Glazing Reference Manual; 2009.
- L. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2017.
- M. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2014, with Errata (2017).
- N. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2017.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data on Insulating Glass Unit, Glazing Unit, Plastic Sheet Glazing Unit, Plastic Film, and \_\_\_\_\_ Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
- C. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.
- D. Samples: Submit two samples 12 by 12 inch (\_\_\_ by \_\_\_ mm) in size of glass units.
- E. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

#### **1.5. QUALITY ASSURANCE**

- A. Perform Work in accordance with GANA (GM), GANA (SM), and GANA (LGRM) for glazing installation methods.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of experience.
- C. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years experience.

#### **1.6. FIELD CONDITIONS**

- A. Do not install glazing when ambient temperature is less than 40 degrees F (4 degrees C).
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

#### **1.7. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Insulating Glass Units: Provide a ten (10) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including providing products to replace failed units.

### **PART 2 PRODUCTS**

#### **2.1. MANUFACTURERS**

- A. Float Glass Manufacturers:
  - 1. Pilkington North America Inc; : [www.pilkington.com/na/#sle](http://www.pilkington.com/na/#sle).
  - 2. Vitro Architectural Glass (formerly PPG Glass); : [www.vitroglazings.com/#sle](http://www.vitroglazings.com/#sle).
  - 3. Substitutions: Refer to Section 01 6000 - Product Requirements.

## **2.2. PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES**

- A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
  - 1. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
  - 2. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
  - 3. Glass thicknesses listed are minimum.
- B. Vapor Retarder and Air Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure vapor retarder and air barrier.
  - 1. In conjunction with vapor retarder and joint sealer materials described in other sections.
- C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
  - 1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
  - 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
  - 3. Solar Optical Properties: Comply with NFRC 300 test method.

## **2.3. GLASS MATERIALS**

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
  - 1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3.

## **2.4. INSULATING GLASS UNITS**

- A. Manufacturers:
  - 1. Any of the manufacturers specified for float glass.
- B. Insulating Glass Units: Types as indicated.
  - 1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
  - 2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
  - 3. Spacer Color: Black.
  - 4. Edge Seal:
    - a. Color: Black.
  - 5. Purge interpane space with dry air, hermetically sealed.
- C. Type IG-1 - Insulating Glass Units: Vision glass, double glazed.
  - 1. Applications: Exterior glazing unless otherwise indicated.
  - 2. Space between lites filled with air.
  - 3. Outboard Lite: Annealed float glass, 1/4 inch (6.4 mm) thick, minimum.

- a. Tint: Match EXISTING Glazing units..
  - b. Coating: Low-E (passive type), on #2 surface.
- 4. Inboard Lite: Annealed float glass, 1/4 inch (6.4 mm) thick, minimum.
  - a. Tint: Match EXISTING Glazing units.
- 5. Total Thickness: 1 inch (25.4 mm).
- 6. Thermal Transmittance (U-Value), Winter - Center of Glass: .29, nominal.
- 7. Visible Light Transmittance (VLT): 70 percent, nominal. Maximum.
- 8. Solar Heat Gain Coefficient (SHGC): 0.39, nominal. Minimum.
- 9. Visible Light Reflectance, Outside: 11 percent, nominal.
- 10. Glazing Method: Dry glazing method, gasket glazing.

## **2.5. ACCESSORIES**

- A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot (25 mm for each square meter) of glazing or minimum 4 inch (100 mm) by width of glazing rabbet space minus 1/16 inch (1.5 mm) by height to suit glazing method and pane weight and area.
- B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Continuous by one half the height of the glazing stop by thickness to suit application, self adhesive on one face.
- C. Glazing Tape, Back Bedding Mastic Type: Preformed, butyl-based, 100 percent solids compound with integral resilient spacer rod applicable to application indicated; 5 to 30 cured Shore A durometer hardness; coiled on release paper; black color.
- D. Glazing Splines: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; color black.

## **PART 3 EXECUTION**

### **3.1. VERIFICATION OF CONDITIONS**

- A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

### **3.2. PREPARATION**

- A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.



### **3.3. INSTALLATION, GENERAL**

### **3.4. INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)**

- A. Application - Exterior and/or Interior Glazed: Set glazing infills from either the exterior or the interior of the building.
- B. Place setting blocks at 1/4 points with edge block no more than 6 inch (152 mm) from corners.
- C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.
- D. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

### **3.5. CLEANING**

- A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.
- B. Remove non-permanent labels immediately after glazing installation is complete.
- C. Clean glass and adjacent surfaces after sealants are fully cured.
- D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

### **3.6. PROTECTION**

- A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.
- B. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

### **END OF SECTION**



## **SECTION 09 2116 - GYPSUM BOARD ASSEMBLIES**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Performance criteria for gypsum board assemblies.
- B. Metal stud wall framing.
- C. Metal channel ceiling framing.
- D. Acoustic insulation.
- E. Gypsum sheathing.
- F. Gypsum wallboard.
- G. Joint treatment and accessories.
- H. Textured finish system.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 05 4000 - Cold-Formed Metal Framing: Exterior wind-load-bearing metal stud framing.
- B. Section 06 1000 - Rough Carpentry: Building framing and sheathing.
- C. Section 06 1000 - Rough Carpentry: Wood blocking product and execution requirements.
- D. Section 07 2100 - Thermal Insulation: Acoustic insulation.
- E. Section 07 9200 - Joint Sealants: Sealing acoustical gaps in construction other than gypsum board or plaster work.
- F. Section 09 2216 - Non-Structural Metal Framing.

#### **1.3. REFERENCE STANDARDS**

- A. AISI S100-12 - North American Specification for the Design of Cold-Formed Steel Structural Members; American Iron and Steel Institute; 2012.
- B. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2010 (Reaffirmed 2016).
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- D. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2015.
- E. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2014, with Editorial Revision (2015).
- F. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2017.
- G. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2017.
- H. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2018a.

- I. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2015.
- J. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2016.
- K. ASTM C1047 - Standard Specification for Accessories For Gypsum Wallboard and Gypsum Veneer Base; 2014a.
- L. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2013.
- M. ASTM C1280 - Standard Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing; 2013a.
- N. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.
- O. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009 (Reapproved 2016).
- P. ASTM E413 - Classification for Rating Sound Insulation; 2016.
- Q. GA-216 - Application and Finishing of Gypsum Panel Products; 2016.
- R. GA-600 - Fire Resistance Design Manual; 2015.
- S. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- T. UL (FRD) - Fire Resistance Directory; Current Edition.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.
- C. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

## **PART 2 PRODUCTS**

### **2.1. GYPSUM BOARD ASSEMBLIES**

- A. Provide completed assemblies complying with ASTM C840 and GA-216.
- B. Interior Partitions, Indicated as Acoustic: Provide completed assemblies with the following characteristics:
  - 1. Acoustic Attenuation: STC of 50-54 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

### **2.2. METAL FRAMING MATERIALS**

- A. Manufacturers - Metal Framing, Connectors, and Accessories:
  - 1. ClarkDietrich Building Systems; \_\_\_\_: [www.clarkdietrich.com/#sle](http://www.clarkdietrich.com/#sle).
  - 2. SCAFCO Corporation; \_\_\_\_: [www.scafco.com/#sle](http://www.scafco.com/#sle).

3. Substitutions: See Section 01 6000 - Product Requirements.
- B. Loadbearing Studs for Application of Gypsum Board: As specified in Section 05 4000.
- C. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf (L/240 at 240 Pa).
  1. Studs: "C" shaped with flat or formed webs.
  2. Runners: U shaped, sized to match studs.
  3. Ceiling Channels: C-shaped.
  4. Furring: Hat-shaped sections, minimum depth of 7/8 inch (22 mm).
  5. Resilient Furring Channels: Single or double leg configuration; 1/2 inch (12 mm) channel depth.
    - a. Products:
      - 1) ClarkDietrich Building Systems; RC Deluxe Resilient Channel: [www.clarkdietrich.com/#sle](http://www.clarkdietrich.com/#sle).
      - 2) Substitutions: See Section 01 6000 - Product Requirements.
- D. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection using slotted holes, screws and anti-friction bushings, preventing rotation of studs while maintaining structural performance of partition.
  1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI S100-12.
  2. Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot dipped galvanized coating.
- E. Non-Loadbearing Framing Accessories:
  1. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
  2. Framing Connectors: ASTM A653/A653M G90 galvanized steel clips; secures cold rolled channel to wall studs for lateral bracing.
    - a. Products:
      - 1) ClarkDietrich Building Systems; FastBridge Clip (FB33): [www.clarkdietrich.com/#sle](http://www.clarkdietrich.com/#sle).

### 2.3. BOARD MATERIALS

- A. Manufacturers - Gypsum-Based Board:
  1. American Gypsum Company; \_\_\_\_: [www.americangypsum.com/#sle](http://www.americangypsum.com/#sle).
  2. Georgia-Pacific Gypsum; \_\_\_\_: [www.gpgypsum.com/#sle](http://www.gpgypsum.com/#sle).
  3. National Gypsum Company; \_\_\_\_: [www.nationalgypsum.com/#sle](http://www.nationalgypsum.com/#sle).
  4. USG Corporation; \_\_\_\_: [www.usg.com/#sle](http://www.usg.com/#sle).
  5. Substitutions: See Section 01 6000 - Product Requirements.
- B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
  1. Application: Use for vertical surfaces, unless otherwise indicated.
  2. Thickness:
    - a. Vertical Surfaces: 5/8 inch (16 mm).
    - b. Ceilings: 5/8 inch (16 mm).
  3. Paper-Faced Products:
    - a. American Gypsum Company; FireBloc Type X Gypsum Wallboard.

- b. CertainTeed Corporation; Type X Drywall.
  - c. Georgia-Pacific Gypsum; ToughRock Fireguard X.
  - d. Substitutions: See Section 01 6000 - Product Requirements.
- C. Exterior Sheathing Board: Sizes to minimize joints in place; ends square cut.
  - 1. Application: Exterior sheathing, unless otherwise indicated.
  - 2. Glass Mat Faced Sheathing: Glass mat faced gypsum substrate as defined in ASTM C1177/C1177M.
  - 3. Edges: Square.
  - 4. Glass Mat Faced Products:
    - a. CertainTeed Corporation; GlasRoc 1/2" Exterior Sheathing.
    - b. Georgia-Pacific Gypsum; DensGlass Sheathing.
    - c. Substitutions: See Section 01 6000 - Product Requirements.

#### **2.4. GYPSUM WALLBOARD ACCESSORIES**

- A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced. Thickness: 3.5 inch (\_\_\_\_ mm).
- B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.
- C. Water-Resistive Barrier: As specified in Section 07 2500.
- D. Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.
  - 1. Types: As detailed or required for finished appearance.
  - 2. Special Shapes: In addition to conventional corner bead and control joints, provide U-bead at exposed panel edges.
  - 3. Products:
    - a. Same manufacturer as framing materials.
    - b. Phillips Manufacturing Co: [www.phillipsmfg.com](http://www.phillipsmfg.com).
    - c. Trim-tex, Inc: [www.trim-tex.com](http://www.trim-tex.com).
- E. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
  - 1. Fiberglass Tape: 2 inch (50 mm) wide, coated glass fiber tape for joints and corners, except as otherwise indicated.
  - 2. Paper Tape: 2 inch (50 mm) wide, creased paper tape for joints and corners, except as otherwise indicated.
  - 3. Joint Compound: Drying type, vinyl-based, ready-mixed.
  - 4. Joint Compound: Setting type, field-mixed.
- F. Textured Finish Materials: Latex-based compound; plain.
- G. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inch (0.84 mm) in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion resistant.
- H. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch (0.84 to 2.84 mm) in Thickness: ASTM C954; steel drill screws, corrosion resistant.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

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

### **3.2. FRAMING INSTALLATION**

- A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
- C. Studs: Space studs at 16 inches on center (at 406 mm on center).
  - 1. Extend partition framing to structure where indicated and to ceiling in other locations.
  - 2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
  - 3. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.
- D. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.
- E. Blocking: Install wood blocking for support of:
  - 1. Framed openings.

### **3.3. ACOUSTIC ACCESSORIES INSTALLATION**

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
  - 1. Place two beads continuously on substrate before installation of perimeter framing members.
  - 2. Place continuous bead at perimeter of each layer of gypsum board.
  - 3. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

### **3.4. BOARD INSTALLATION**

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
  - 1. Exception: Tapered edges to receive joint treatment at right angles to framing.
- C. Exterior Sheathing: Comply with ASTM C1280. Install sheathing vertically, with edges butted tight and ends occurring over firm bearing.

- D. Installation on Metal Framing: Use screws for attachment of gypsum board except face layer of non-rated double-layer assemblies, which may be installed by means of adhesive lamination.

### **3.5. INSTALLATION OF TRIM AND ACCESSORIES**

- A. Control Joints: Place control joints consistent with lines of building spaces and as follows:
  - 1. Not more than 30 feet (10 meters) apart on walls and ceilings over 50 feet (16 meters) long.
  - 2. At exterior soffits, not more than 30 feet (10 meters) apart in both directions.
  - 3. Verify all proposed locations with Architect, prior to installation.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

### **3.6. JOINT TREATMENT**

- A. Glass Mat Faced Gypsum Board and Exterior Glass Mat Faced Sheathing: Use fiberglass joint tape, embed and finish with setting type joint compound.
- B. Paper Faced Gypsum Board: Use paper joint tape, embed with drying type joint compound and finish with drying type joint compound.
- C. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
  - 1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
  - 2. Level 1: Fire rated wall areas above finished ceilings, whether or not accessible in the completed construction.
- D. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
  - 1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).

### **3.7. TEXTURE FINISH**

- A. Apply finish texture coating by means of spraying apparatus in accordance with manufacturer's instructions existing wall finishes..

### **3.8. TOLERANCES**

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

**END OF SECTION**



## **SECTION 09 5100 - ACOUSTICAL CEILINGS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Suspended metal grid ceiling system.
- B. Acoustical units.
- C. Supplementary acoustical insulation above ceiling.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 07 2100 - Thermal Insulation: Acoustical insulation.

#### **1.3. REFERENCE STANDARDS**

- A. ASTM C635/C635M - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2017.
- B. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2017.
- C. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2014.

#### **1.4. ADMINISTRATIVE REQUIREMENTS**

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

#### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on suspension system components and acoustical units.
- C. Samples: Submit two samples \_\_12\_\_ by \_\_12\_\_ inch (\_\_\_\_ by \_\_\_\_ mm) in size illustrating material and finish of acoustical units.
- D. Samples: Submit two samples each, 6 inches (\_\_\_\_ mm) long, of suspension system main runner.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 6000 - Product Requirements, for additional provisions.
  - 2. Extra Acoustical Units: Quantity equal to 5 percent of total installed.

#### **1.6. QUALITY ASSURANCE**

- A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years experience.

- B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years experience.

#### **1.7. FIELD CONDITIONS**

- A. Maintain uniform temperature of minimum 60 degrees F (16 degrees C), and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

### **PART 2 PRODUCTS**

#### **2.1. MANUFACTURERS**

- A. Acoustic Tiles/Panels:
  - 1. Basis-of Design: Armstrong World Industries, Inc; : [www.armstrong.com/#sle](http://www.armstrong.com/#sle).
  - 2. CertainTeed Corporation; : [www.certainteed.com/#sle](http://www.certainteed.com/#sle).
  - 3. USG; : [www.usg.com/#sle](http://www.usg.com/#sle).
  - 4. Substitutions: See Section 01 6000 - Product Requirements.
- B. Suspension Systems:
  - 1. Same as for acoustical units.
  - 2. Substitutions: See Section 01 6000 - Product Requirements.

#### **2.2. ACOUSTICAL UNITS**

- A. Acoustical Units - General: ASTM E1264, Class A.
- B. Acoustical Tile Type : Painted mineral fiber, ASTM E1264 Type III, with the following characteristics:
  - 1. Size: 24 by 48 inches (\_\_\_ by \_\_\_ mm).
  - 2. Thickness: 3/4 inches (\_\_\_ mm).
  - 3. Composition: Water felted.
  - 4. Density: 1.09 lb/cu ft (\_\_\_ kg/cu cm).
  - 5. Light Reflectance: 85 percent, determined in accordance with ASTM E1264.
  - 6. NRC Range:.65 to \_\_\_, determined in accordance with ASTM E1264.
  - 7. Ceiling Attenuation Class (CAC):.35, determined in accordance with ASTM E1264.
  - 8. Edge: Beveled tegular.
  - 9. Surface Color: White.
  - 10. Surface Pattern: Non-directional fissured.
  - 11. Suspension System: Type Exposed.
  - 12. Products:
    - a. Cirrus Second Look II #513.
    - b. Substitutions: See Section 01 6000 - Product Requirements.
- C. Acoustical Tile: Painted mineral fiber, ASTM E1264, Type IX, Form 2, Pattern G with the following characteristics:
  - 1. Size: 24 by 48 inches (\_\_\_ by \_\_\_ mm).
  - 2. Thickness: 5/8 inches (\_\_\_ mm).
  - 3. Composition: Water felted.
  - 4. Density:.82 lb/cu ft (\_\_\_ kg/cu cm).

5. Light Reflectance: 85 percent, determined in accordance with ASTM E1264.
6. Ceiling Attenuation Class (CAC): 33, determined in accordance with ASTM E1264.
7. Edge: Square.
8. Surface Color: White.
9. Surface Pattern: Smooth.
10. Suspension System: Type Exposed.
11. Products:
  - a. Kitchen Zone #672.
  - b. Substitutions: See Section 01 6000 - Product Requirements.

### **2.3. SUSPENSION SYSTEM(S)**

- A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.
- B. Exposed Steel Suspension System: Formed steel, commercial quality cold rolled.
  1. Profile: Tee; 15/16 inch (24 mm) wide face.
  2. Construction: Double web.
  3. Finish: White painted.
  4. Products:
    - a. Basis-of-Design: Armstrong Prelude 15/16.
    - b. Substitutions: See Section 01 6000 - Product Requirements.

### **2.4. ACCESSORIES**

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- B. Perimeter Moldings: Same material and finish as grid.
  1. At Exposed Grid: Provide L-shaped molding for mounting at same elevation as face of grid.
- C. Acoustical Insulation: Specified in Section 07 2100.
  1. Thickness: 2 inch (50 mm).
  2. Size: To fit acoustical suspension system.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

### **3.2. INSTALLATION - SUSPENSION SYSTEM**

- A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.
- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.

- C. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- D. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- G. Support fixture loads using supplementary hangers located within 6 inches (150 mm) of each corner, or support components independently.
- H. Do not eccentrically load system or induce rotation of runners.
- I. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
  - 1. Use longest practical lengths.
  - 2. Overlap and rivet corners.

### **3.3. INSTALLATION - ACOUSTICAL UNITS**

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install units after above-ceiling work is complete.
- E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- F. Cutting Acoustical Units:
  - 1. Make field cut edges of same profile as factory edges.

### **3.4. SCHEDULE**

- A. Kitchen Areas: 24 by 48 inch - Armstrong "Kitchen Zone #672"
- B. Dining Areas and all other rooms: 24 x48 - Armstrong "Cirrus Second Look II #513"

**END OF SECTION**

## **SECTION 09 6500 - RESILIENT FLOORING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Resilient sheet flooring.
- B. Resilient tile flooring.
- C. Resilient base.
- D. Installation accessories.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 03 5400 - Cast Underlayment.

#### **1.3. REFERENCE STANDARDS**

- A. ASTM D6329 - Standard Guide for Developing Methodology for Evaluating the Ability of Indoor Materials to Support Microbial Growth Using Static Environmental Chambers; 1998 (Reapproved 2015).
- B. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2017.
- C. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2017.
- D. ASTM F970 - Standard Test Method for Measuring Recovery Properties of Floor Coverings after Static Loading; 2017.
- E. ASTM F1861 - Standard Specification for Resilient Wall Base; 2016.
- F. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; 2015.
- G. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2011.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Shop Drawings: Indicate floor patterns.
- D. Verification Samples: Submit two samples, 7 by 16 inch (\_\_\_ by \_\_\_ mm) in size illustrating color and pattern for each resilient flooring product specified.
- E. Sustainable Design Submittal: Submit VOC content documentation for flooring and adhesives.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 6000 - Product Requirements, for additional provisions.
  - 2. Extra Flooring Material: 40 square feet (\_\_\_\_ square meters) of each type and color.
  - 3. Extra Wall Base: 40 linear feet (\_\_\_\_ linear meters) of each type and color.

### **1.5. QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing specified flooring with minimum Ten years experience.
- B. Installer Qualifications: Company specializing in installing specified flooring with minimum three years experience.

### **1.6. DELIVERY, STORAGE, AND HANDLING**

- A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.
- B. Store all materials off of the floor in an acclimatized, weather-tight space.
- C. Maintain temperature in storage area between 55 degrees F (13 degrees C) and 90 degrees F (72 degrees C).
- D. Protect roll materials from damage by storing on end.
- E. Do not double stack pallets.

### **1.7. FIELD CONDITIONS**

- A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F (21 degrees C) to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F (13 degrees C).

## **PART 2 PRODUCTS**

### **2.1. SHEET FLOORING**

- A. Vinyl Sheet Flooring: Color and pattern throughout wear layer thickness, with backing.
  - 1. Manufacturers:
    - a. Altro USA, Inc., Altro Stronghold 30.
  - 2. Wear Layer Thickness: 0.12 inch (3 mm) minimum.
  - 3. Sheet Width: 79 inch (\_\_\_\_ mm) minimum.
  - 4. Roll Length: 66 feet
  - 5. Backing: non-woven polyester/cellulose, glass fiber reinforcement.
  - 6. Slip Resistance: ADA compliant, ASTM D 2047 James Machine, SCoF Dry .92 / Wet 0.88 DIN 51130 Ramp Test R-12.
  - 7. Static Load Limit: ASTM F 970, Standard Test Method for Static Load Limit, Modified - 2000 PSI.
  - 8. Seams: Heat welded.
  - 9. Integral coved base with cap strip.
  - 10. Pattern: \_\_\_\_\_.
  - 11. Color: To be selected by Architect from manufacturer's full range.
- B. Welding Rod: Solid bead in material compatible with flooring, produced by flooring manufacturer for heat welding seams, and in color matching field color.

## **2.2. TILE FLOORING**

- A. Vinyl Luxury Tile: Printed film type, with transparent or translucent wear layer.
  - 1. Manufacturers:
    - a. Shaw Contract. Quiet Cover #0186V
    - b. Substitutions: See Section 01 6000 - Product Requirements.
  - 2. Minimum Requirements: Comply with ASTM F1700, of Class corresponding to type specified.
    - a. Class III Printed Film Vinyl Plank, type A (smooth), type B (embossed)
  - 3. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
  - 4. Plank Tile Size: 7 by 48 inch (185 by 1212 mm).
  - 5. Wear Layer Thickness: 0.020 inch (0.50 mm).
  - 6. Total Thickness: .203 inch (5 mm).
  - 7. Edge Profile: Micro Bevel.
  - 8. Antimicrobial: Yes, FlorSept.
  - 9. Installation: Floating.
  - 10. Pattern: Wood Grain.
  - 11. Color: Urban Ash #00540.

## **2.3. RESILIENT BASE**

- A. Resilient Base - Type \_\_\_\_: ASTM F1861, Type TS rubber, vulcanized thermoset; top set Style B, Cove.
  - 1. Manufacturers:
    - a. Burke Flooring; Commercial Wall Base - TS: [www.burkeflooring.com/#sle](http://www.burkeflooring.com/#sle).
    - b. Johnsonite, a Tarkett Company; \_\_\_\_: [www.johnsonite.com/#sle](http://www.johnsonite.com/#sle).
    - c. Roppe Corp; \_\_\_\_: [www.roppe.com/#sle](http://www.roppe.com/#sle).
    - d. Substitutions: See Section 01 6000 - Product Requirements.
  - 2. Height: 4 inch (100 mm).
  - 3. Thickness: 0.125 inch (3.2 mm).
  - 4. Finish: Satin.
  - 5. Length: Roll.
  - 6. Color: To be selected by Architect from manufacturer's full range.

## **2.4. ACCESSORIES**

- A. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
  - 1. VOC Content Limits: As specified in Section 01 6116.
- B. Moldings, Transition and Edge Strips: Same material as base.
- C. Filler for Coved Base: Plastic.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.
- C. Cementitious Sub-floor Surfaces: Verify that substrates are dry enough and ready for resilient flooring installation by testing for moisture and pH.
  - 1. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

### **3.2. PREPARATION**

- A. Remove existing resilient flooring and flooring adhesives; follow the recommendations of RFCI (RWP).
- B. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
- C. Remove sub-floor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.
- D. Prohibit traffic until filler is fully cured.
- E. Clean substrate.

### **3.3. INSTALLATION - GENERAL**

- A. Starting installation constitutes acceptance of sub-floor conditions.
- B. Install in accordance with manufacturer's written instructions.
- C. Floating Installation: Set flooring in place in accordance with manufacturer's instructions.
- D. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.
- E. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

### **3.4. INSTALLATION - SHEET FLOORING**

- A. Lay flooring with joints and seams parallel to longer room dimensions, to produce minimum number of seams. Lay out seams to avoid widths less than 1/3 of roll width; match patterns at seams.
- B. Seal seams by heat welding where indicated.
- C. Coved Base: Manufacturer's cove former base filler as backing at floor to wall junction. Extend sheet flooring vertically to height indicated, and cover top edge with metal cap strip.



- D. Flooring **must be** mechanically fastened to all drain outlets and cleanouts.
  - 1. Surface Clamping drains are not to be utilized. Contractor must modify drain covers.
- E. Install per Manufacturer's Recommendation and Installation.

### **3.5. INSTALLATION - TILE FLOORING**

- A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.
- B. Lay flooring with joints and seams parallel to building lines to produce symmetrical pattern.
- C. Install plank tile with a random offset of at least 6 inches (152 mm) from adjacent rows.

### **3.6. INSTALLATION - RESILIENT BASE**

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 72 inches (\_\_\_\_ mm) between joints.
- B. Miter internal corners. At external corners, 'V' cut back of base strip to 2/3 of its thickness and fold. At exposed ends, use premolded units.
- C. Install base on solid backing. Bond tightly to wall and floor surfaces.

### **3.7. CLEANING**

- A. Clean in accordance with manufacturer's written instructions.

### **3.8. PROTECTION**

- A. Prohibit traffic on resilient flooring for 48 hours after installation.

### **3.9. SCHEDULE**

- A. Main Floors: LVT with Rubber Base
- B. Kitchen and Cooler Floor: Sheet Vinyl

**END OF SECTION**



## **SECTION 09 6813 - TILE CARPETING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Carpet tile, fully adhered.
- B. Removal of existing carpet tile.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 01 7419 - Construction Waste Management and Disposal: Reclamation/Recycling of new carpet tile scrap, removed carpet tile, and \_\_\_\_\_.
- C. Section 09 0561 - Common Work Results for Flooring Preparation: Independent agency testing of concrete slabs, removal of existing floor coverings, cleaning, and preparation.

#### **1.3. REFERENCE STANDARDS**

- A. CRI 104 - Standard for Installation of Commercial Carpet; 2015.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.
- C. Samples: Submit two carpet tiles illustrating color and pattern design for each carpet color selected.
- D. Submit two, \_\_\_\_ inch (\_\_\_\_ mm) long samples of edge strip.
- E. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention, and \_\_\_\_\_.
- F. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 6000 - Product Requirements, for additional provisions.
  - 2. Extra Carpet Tiles: 2 boxes of each color and pattern installed.

#### **1.5. QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing specified carpet tile with minimum three years experience.
- B. Installer Qualifications: Company specializing in installing carpet tile with minimum three years experience.

## **1.6. FIELD CONDITIONS**

- A. Store materials in area of installation for minimum period of 24 hours prior to installation.

## **PART 2 PRODUCTS**

### **2.1. MATERIALS**

- A. Tile Carpeting: Tufted, manufactured in one color dye lot.
  - 1. Product: Uncover Tile manufactured by Shaw Contract.
  - 2. Tile Size: 9 by 36 inch (2219 by 9144 mm), nominal.
  - 3. Color: #50760 Alum.
  - 4. Pattern: Vertical Layers #5T150.
  - 5. Pile Weight: 24 oz/sq yd (\_\_\_\_ gm/sq m).

### **2.2. ACCESSORIES**

- A. Sub-Floor Filler: White premix latex; type recommended by flooring material manufacturer.
- B. Edge Strips: Embossed aluminum, color as selected by Architect.
- C. Adhesives:
  - 1. Compatible with materials being adhered; maximum VOC content of 50 g/L; CRI (GLP) certified; in lieu of labeled product, independent test report showing compliance is acceptable.
- D. Carpet Tile Adhesive: Recommended by carpet tile manufacturer; releasable type.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that sub-floor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive carpet tile.
- C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to sub-floor surfaces.
- D. Cementitious Sub-floor Surfaces: Verify that substrates are dry enough and ready for flooring installation by testing for moisture and pH.
  - 1. Test in accordance with Section 09 0561.
  - 2. Obtain instructions if test results are not within limits recommended by flooring material manufacturer and adhesive materials manufacturer.

### **3.2. PREPARATION**

- A. Remove existing carpet / flooring.

- B. Prepare floor substrates for installation of flooring in accordance with Section 09 0561.

### **3.3. INSTALLATION**

- A. Starting installation constitutes acceptance of sub-floor conditions.
- B. Install carpet tile in accordance with manufacturer's instructions.
- C. Blend carpet from different cartons to ensure minimal variation in color match.
- D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.
- E. Lay carpet tile in square pattern, with pile direction parallel to next unit, set parallel to building lines.
- F. Fully adhere carpet tile to substrate.
- G. Trim carpet tile neatly at walls and around interruptions.
- H. Complete installation of edge strips, concealing exposed edges.

### **3.4. CLEANING**

- A. Remove excess adhesive without damage, from floor, base, and wall surfaces.
- B. Clean and vacuum carpet surfaces.

**END OF SECTION**



## **SECTION 09 9113 - EXTERIOR PAINTING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
- D. Do Not Paint or Finish the Following Items:
  - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
  - 2. Items indicated to receive other finishes.
  - 3. Items indicated to remain unfinished.
  - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
  - 5. Non-metallic roofing and flashing.
  - 6. Stainless steel, anodized aluminum, bronze, terne coated stainless steel, zinc, and lead.
  - 7. Floors, unless specifically indicated.
  - 8. Glass.
  - 9. Concealed pipes, ducts, and conduits.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 05 5000 - Metal Fabrications: Shop-primed items.
- C. Section 09 9123 - Interior Painting.

#### **1.3. DEFINITIONS**

- A. Comply with ASTM D16 for interpretation of terms used in this section.

#### **1.4. REFERENCE STANDARDS**

- A. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2016.
- B. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2016.
- C. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.
- D. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).
- E. SSPC-SP 6 - Commercial Blast Cleaning; 2007.

### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
  - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
  - 2. MPI product number (e.g. MPI #47).
  - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
  - 1. Where sheen is specified, submit samples in only that sheen.
  - 2. Where sheen is not specified, discuss sheen options with Architect before preparing samples, to eliminate sheens definitely not required.
  - 3. Allow 30 days for approval process, after receipt of complete samples by Architect.
  - 4. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved.
- D. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 6000 - Product Requirements, for additional provisions.
  - 2. Extra Paint and Finish Materials: 1 gallon (4 L) of each color; from the same product run, store where directed.
  - 3. Label each container with color in addition to the manufacturer's label.

### **1.6. QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum Five years experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum Five years experience.

### **1.7. MOCK-UP**

- A. See Section 01 4000 - Quality Requirements, for general requirements for mock-up.
- B. Mock-up may remain as part of the work.

### **1.8. DELIVERY, STORAGE, AND HANDLING**

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.



- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

#### **1.9. FIELD CONDITIONS**

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

### **PART 2 PRODUCTS**

#### **2.1. MANUFACTURERS**

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
  - 1. Behr Process Corporation; \_\_\_\_: [www.behr.com/#sle](http://www.behr.com/#sle).
  - 2. PPG Paints; \_\_\_\_: [www.ppgpaints.com/#sle](http://www.ppgpaints.com/#sle).
  - 3. Sherwin-Williams Company; : [www.sherwin-williams.com/#sle](http://www.sherwin-williams.com/#sle).
  - 4. Benjamin Moore.
- C. Primer Sealers: Same manufacturer as top coats.
- D. Substitutions: See Section 01 6000 - Product Requirements.

#### **2.2. PAINTS AND FINISHES - GENERAL**

- A. Paints and Finishes: Ready mixed, unless required to be a field-catalyzed paint.
  - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
  - 2. Supply each paint material in quantity required to complete entire project's work from a single production run.
  - 3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content: Comply with Section 01 6116.
- C. Colors: As indicated on drawings.
  - 1. Extend colors to surface edges; colors may change at any edge as directed by Architect.

#### **2.3. PAINT SYSTEMS - EXTERIOR**

- A. Paint E-OP - Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including concrete, concrete masonry units, brick, fiber cement siding, primed wood, and primed metal.

1. Two top coats and one coat primer.
  2. Top Coat(s): Exterior Latex; MPI #10, 11, 15, 119, or 214.
- B. Paint ME-OP-2L - Ferrous Metals, Primed, Latex, 2 Coat:
1. Touch-up with rust-inhibitive primer recommended by top coat manufacturer.
  2. Semi-gloss: Two coats of latex enamel; \_\_\_\_.
- C. Paint MgE-OP-3L - Galvanized Metals, Latex, 3 Coat:
1. One coat galvanize primer.
  2. Semi-gloss: Two coats of latex enamel; \_\_\_\_.
- D. Paint E-Pav - Pavement Marking Paint:
1. Yellow: One coat, with reflective particles; \_\_\_\_.
  2. White: One coat, with reflective particles; \_\_\_\_.

#### **2.4. PRIMERS**

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.

#### **2.5. ACCESSORY MATERIALS**

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

### **PART 3 EXECUTION**

#### **3.1. EXAMINATION**

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.
- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
1. Fiber Cement Siding: 12 percent.
  2. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
  3. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.

#### **3.2. PREPARATION**

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.

- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Concrete:
- G. Masonry:
- H. Fiber Cement Siding: Remove dirt, dust and other foreign matter with a stiff fiber brush. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
- I. Ferrous Metal:
  - 1. Solvent clean according to SSPC-SP 1.
  - 2. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.
- J. Exterior Wood Surfaces to Receive Opaque Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior calking compound after prime coat has been applied. Back prime concealed surfaces before installation.
- K. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

### **3.3. APPLICATION**

- A. Exterior Wood to Receive Opaque Finish: If final painting must be delayed more than 2 weeks after installation of woodwork, apply primer within 2 weeks and final coating within 4 weeks.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance.
- E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- F. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

### **3.4. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection.

### **3.5. CLEANING**

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

### **3.6. PROTECTION**

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

**END OF SECTION**

## **SECTION 09 9123 - INTERIOR PAINTING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
- D. Do Not Paint or Finish the Following Items:
  - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
  - 2. Items indicated to receive other finishes.
  - 3. Items indicated to remain unfinished.
  - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
  - 5. Stainless steel, anodized aluminum, bronze, terne coated stainless steel, and lead items.
  - 6. Marble, granite, slate, and other natural stones.
  - 7. Floors, unless specifically indicated.
  - 8. Ceramic and other tiles.
  - 9. Glass.
  - 10. Concealed pipes, ducts, and conduits.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 09 9113 - Exterior Painting.

#### **1.3. DEFINITIONS**

- A. Comply with ASTM D16 for interpretation of terms used in this section.

#### **1.4. REFERENCE STANDARDS**

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2016.
- C. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2016.
- D. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
  - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
  - 2. MPI product number (e.g. MPI #47).
  - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
  - 1. Where sheen is specified, submit samples in only that sheen.
  - 2. Where sheen is not specified, discuss sheen options with Architect before preparing samples, to eliminate sheens definitely not required.
  - 3. Allow 30 days for approval process, after receipt of complete samples by Architect.
- D. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 6000 - Product Requirements, for additional provisions.
  - 2. Extra Paint and Finish Materials: 1 gallon (4 L) of each color; from the same product run, store where directed.
  - 3. Label each container with color in addition to the manufacturer's label.

### **1.6. QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years experience.

### **1.7. MOCK-UP**

- A. See Section 01 4000 - Quality Requirements, for general requirements for mock-up.
- B. Mock-up may remain as part of the work.

### **1.8. DELIVERY, STORAGE, AND HANDLING**

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

### **1.9. FIELD CONDITIONS**

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

## **PART 2 PRODUCTS**

### **2.1. MANUFACTURERS**

- A. Provide paints and finishes from the same manufacturer to the greatest extent possible.
- B. Paints:
  - 1. Base Manufacturer: Benjamin Moore.
  - 2. Sherwin-Williams Company: [www.sherwin-williams.com/#sle](http://www.sherwin-williams.com/#sle).
- C. Primer Sealers: Same manufacturer as top coats.
- D. Substitutions: See Section 01 6000 - Product Requirements.

### **2.2. PAINTS AND FINISHES - GENERAL**

- A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
  - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
  - 2. Supply each paint material in quantity required to complete entire project's work from a single production run.
  - 3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:
  - 1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
    - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
  - 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- C. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.
- D. Colors: As indicated in Color Schedule.
  - 1. Extend colors to surface edges; colors may change at any edge as directed by Architect.

### **2.3. PAINT SYSTEMS - INTERIOR**

- A. Paint I-OP - Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, concrete, concrete masonry units, brick, wood, plaster, uncoated steel, shop primed steel, galvanized steel, and aluminum.
  - 1. Two top coats and one coat primer.
  - 2. Top Coat(s): High Performance Architectural Interior Latex; MPI #138, 139, 140, or 141.

### **2.4. PRIMERS**

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
  - 1. Interior Institutional Low Odor/VOC Primer Sealer; MPI #149.
    - a. Products:
      - 1) PPG Paints Pure Performance Interior Latex Primer, 9-900.
      - 2) PPG Paints Speedhide zero Interior Latex Sealer, 6-4900XI. (MPI #149)
      - 3) Substitutions: Section 01 6000 - Product Requirements.
  - 2. Interior Latex Primer Sealer; MPI #50.
    - a. Products:
      - 1) PPG Paints Speedhide Pro-EV Latex Sealer, 12-900.
      - 2) PPG Paints Speedhide Interior Latex Sealer, 6-2. (MPI #50)
      - 3) Substitutions: Section 01 6000 - Product Requirements.
  - 3. Interior Drywall Primer Sealer.
    - a. Products:
      - 1) PPG Paints Speedhide Pro-EV Latex Sealer, 12-900.
      - 2) PPG Paints Speedhide Interior Latex Sealer, 6-2.
      - 3) PPG Paints Speedhide zero Interior Latex Sealer, 6-4900XI.
      - 4) Substitutions: Section 01 6000 - Product Requirements.

### **2.5. ACCESSORY MATERIALS**

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.
- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:



1. Gypsum Wallboard: 12 percent.
2. Plaster and Stucco: 12 percent.
3. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
4. Interior Wood: 15 percent, measured in accordance with ASTM D4442.

### **3.2. PREPARATION**

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- F. Plaster: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
- G. Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.

### **3.3. APPLICATION**

- A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- D. Sand wood and metal surfaces lightly between coats to achieve required finish.
- E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- F. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

### **3.4. CLEANING**

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

### **3.5. PROTECTION**

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

### **3.6. COLOR SCHEDULE**

- A. Interior Walls and Columns in ALL Rooms as Indicated on Drawings

1. Benjamin Moore #2108-60 Abalone
- B. **ALTERNATE #8:** Paint Interior Columns a second color.
  1. Benjamin Moore #2108-40 Stardust

**END OF SECTION**

## **SECTION 31 1000 - SITE CLEARING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Removal of existing debris.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- C. Section 01 5713 - Temporary Erosion and Sediment Control.
- D. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products.
- E. Section 01 7419 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.
- F. Section 02 4100 - Demolition: Removal of built elements and utilities.
- G. Section 31 2323 - Fill: Fill material for filling holes, pits, and excavations generated as a result of removal operations.
- H. Section 31 2323 - Fill: Filling holes, pits, and excavations generated as a result of removal operations.

#### **1.3. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

### **PART 2 PRODUCTS -- NOT USED**

### **PART 3 EXECUTION**

#### **3.1. SITE CLEARING**

- A. Comply with other requirements specified in Section 01 7000.
- B. Minimize production of dust due to clearing operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

#### **3.2. EXISTING UTILITIES AND BUILT ELEMENTS**

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.

- D. Protect existing structures and other elements that are not to be removed.

### **3.3. DEBRIS**

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

**END OF SECTION**

## **SECTION 31 2200 - GRADING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Rough grading the site for new parking and drainage..
- B. Finish grading.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 31 1000 - Site Clearing.
- B. Section 31 2316 - Excavation.
- C. Section 31 2316.13 - Trenching: Trenching and backfilling.
- D. Section 31 2323 - Fill: Filling and compaction.

#### **1.3. SUBMITTALS**

- A. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.

#### **1.4. QUALITY ASSURANCE**

- A. Perform Work in accordance with City of Prineville, Public Works Department standards.

### **PART 2 PRODUCTS**

#### **2.1. MATERIALS**

- A. Topsoil: See Section 31 2323.
- B. Other Fill Materials: See Section 31 2323.

### **PART 3 EXECUTION**

#### **3.1. EXAMINATION**

- A. Verify that survey bench mark and intended elevations for the Work are as indicated.
- B. Verify the absence of standing or ponding water.

#### **3.2. PREPARATION**

- A. Identify required lines, levels, contours, and datum.
- B. Stake and flag locations of known utilities.
- C. Locate, identify, and protect from damage above- and below-grade utilities to remain.
- D. Provide temporary means and methods to remove all standing or ponding water from areas prior to grading.

- E. Protect site features to remain, including but not limited to bench marks, survey control points, existing structures, sidewalks, and drainage swale, from damage by grading equipment and vehicular traffic.

### **3.3. ROUGH GRADING**

- A. Remove subsoil from areas to be further excavated, re-landscaped, or re-graded.
- B. Do not remove wet subsoil, unless it is subsequently processed to obtain optimum moisture content.
- C. See Section 31 2323 for filling procedures.
- D. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.
- E. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack surface water control.

### **3.4. SOIL REMOVAL AND STOCKPILING**

- A. Stockpile excavated topsoil on site.
- B. Remove excavated subsoil from site.
- C. Stockpiles: Use areas designated on site; pile depth not to exceed 8 feet (2.5 m); protect from erosion.

### **3.5. FINISH GRADING**

- A. Before Finish Grading:
  - 1. Verify building and trench backfilling have been inspected.
  - 2. Verify subgrade has been contoured and compacted.
- B. Remove debris, roots, branches, stones, in excess of 1/2 inch (13 mm) in size. Remove soil contaminated with petroleum products.
- C. Where topsoil is to be placed, scarify surface to depth of 3 inches (75 mm).
- D. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 3 inches (75 mm).
- E. Place topsoil where required to level finish grade.
- F. Place topsoil during dry weather.
- G. Remove roots, weeds, rocks, and foreign material while spreading.
- H. Maintain stability of topsoil during inclement weather. Replace topsoil in areas where surface water has eroded thickness below specifications.

### **3.6. TOLERANCES**

- A. Top Surface of Subgrade: Plus or minus 0.10 foot (1-3/16 inches) (30 mm) from required elevation.
- B. Top Surface of Finish Grade: Plus or minus 0.04 foot (1/2 inch) (13 mm).

### **3.7. REPAIR AND RESTORATION**

- A. Existing Facilities, Utilities, and Site Features to Remain: If damaged due to this work, repair or replace to original condition.

### **3.8. FIELD QUALITY CONTROL**

- A. See Section 31 2323 for compaction density testing.

### **3.9. CLEANING**

- A. Remove unused stockpiled topsoil. Grade stockpile area to prevent standing water.
- B. Leave site clean and raked, ready to receive landscaping.

**END OF SECTION**





## **SECTION 31 2316 - EXCAVATION**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Excavating for paving and stormwater infrastructure..
- B. Trenching for utilities outside the building for stormwater drainage.
- C. Temporary excavation support and protection systems.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 5713 - Temporary Erosion and Sediment Control: Slope protection and erosion control.
- B. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring. General requirements for dewatering of excavations and water control.
- C. Section 21 0553 - Identification for Fire Suppression Piping and Equipment: Underground warning tapes at underground fire suppression lines.
- D. Section 22 0553 - Identification for Plumbing Piping and Equipment: Underground warning tapes at underground plumbing lines.
- E. Section 23 0553 - Identification for HVAC Piping and Equipment: Underground warning tapes at underground HVAC lines.
- F. Section 26 0553 - Identification for Electrical Systems: Underground warning tapes at underground electrical lines.
- G. Section 31 1000 - Site Clearing: Vegetation and existing debris removal.
- H. Section 31 2200 - Grading: Grading.
- I. Section 31 2316.13 - Trenching: Excavating for utility trenches outside the building.
- J. Section 31 2323 - Fill: Fill materials, backfilling, and compacting.
- K. Section 33 4100 - Subdrainage: Filter aggregate and filter fabric for foundation drainage systems.

#### **1.3. REFERENCE STANDARDS**

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

## **PART 2 PRODUCTS**

### **2.1. MATERIALS**

- A. Bedding and Fill to Correct Over-Excavation:
  - 1. See Section 31 2323 for bedding and corrective fill materials at general excavations.
  - 2. See Section 31 2316.13 for bedding and corrective fill materials at utility trenches.
- B. Underground Warning Tapes:
  - 1. See Section for 22 0553 underground warning tapes at underground plumbing lines.
  - 2. See Section for 26 0553 underground warning tapes at underground electrical lines.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that survey bench mark and intended elevations for the work are as indicated.
- B. Survey existing adjacent structures and improvements and establish exact elevations at fixed points to act as benchmarks.
  - 1. Resurvey benchmarks during installation of excavation support and protection systems and notify Owner if any changes in elevations or positions occur or if cracks, sags, or other damage is evident in adjacent construction.
- C. Determine the prevailing groundwater level prior to excavation. If the proposed excavation extends less than 1 foot (305 mm) into the prevailing groundwater, control groundwater intrusion with perimeter drains routed to sump pumps, or as directed by Architect. If the proposed excavation extends more than 1 foot (305 mm) into the prevailing groundwater, control groundwater intrusion with a comprehensive dewatering procedures, or as directed by Geotechnical Engineer.

### **3.2. PREPARATION**

- A. Identify required lines, levels, contours, and datum locations.
- B. Locate, identify, and protect utilities that remain and protect from damage.
- C. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- D. Grade top perimeter of excavation to prevent surface water from draining into excavation. Provide temporary means and methods, as required, to maintain surface water diversion until no longer needed, or as directed by Architect.

### **3.3. TEMPORARY EXCAVATION SUPPORT AND PROTECTION**

- A. Excavation Safety: Comply with OSHA's Excavation Standard, 29 CFR 1926, Subpart P.
  - 1. Excavations in stable rock or in less than 5 feet (1.5 m) in depth in ground judged as having no cave-in potential do not require excavation support and protection systems.

### **3.4. EXCAVATING**

- A. Excavate to accommodate construction operations and parking lot and drainage improvements.
  - 1. Excavate to the specified elevations.
  - 2. Cut utility trenches wide enough to allow inspection of installed utilities.
- B. Notify Architect of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- C. Do not interfere with 45 degree bearing splay of foundations.
- D. Provide temporary means and methods, as required, to remove all water from excavations until directed by Architect. Remove and replace soils deemed suitable by classification and which are excessively moist due to lack of dewatering or surface water control.

### **3.5. SUBGRADE PREPARATION**

- A. See Section 31 2323 for subgrade preparation at general excavations.
- B. See Section 31 2316.13 for subgrade preparation at utility trenches.

### **3.6. FILLING AND BACKFILLING**

- A. Do not fill or backfill until all debris, water, unsatisfactory soil materials, obstructions, and deleterious materials have been removed from excavation.
- B. Install underground warning tape at buried utilities .
- C. See Section 31 2323 for fill, backfill, and compaction requirements at general excavations.
- D. See Section 31 2316.13 for fill, backfill, and compaction requirements at utility trenches.
- E. See Section 31 2200 for rough and final grading and topsoil replacement requirements.

### **3.7. REPAIR**

- A. Correct areas that are over-excavated and load-bearing surfaces that are disturbed; see Section 31 2323.

### **3.8. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection and testing.

### **3.9. CLEANING**

- A. Remove excavated material that is unsuitable for re-use from site.
- B. Remove excess excavated material from site.

### **3.10. PROTECTION**

- A. Divert surface flow from rains or water discharges from the excavation.

- B. Prevent displacement of banks and keep loose soil from falling into excavation; maintain soil stability.
- C. Protect open excavations from rainfall, runoff, freezing groundwater, or excessive drying so as to maintain foundation subgrade in satisfactory, undisturbed condition.
- D. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.
- E. Keep excavations free of standing water and completely free of water during concrete placement.

**END OF SECTION**

## **SECTION 31 2316.13 - TRENCHING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Backfilling and compacting for utilities outside the building for stormwater infrastructure.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 31 2200 - Grading: Site grading.
- B. Section 31 2316 - Excavation: Building and foundation excavating.
- C. Section 31 2323 - Fill: Backfilling at building and foundations.
- D. Section 33 4100 - Subdrainage: Filter aggregate and filter fabric for foundation drainage systems.

#### **1.3. DEFINITIONS**

- A. Finish Grade Elevations: Indicated on drawings.
- B. Subgrade Elevations: Indicated on drawings.

#### **1.4. REFERENCE STANDARDS**

- A. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18 in.) Drop; 2017.
- B. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)); 2012, with Editorial Revision (2015).
- C. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup> (2,700 kN m/m<sup>3</sup>)); 2012, with Editorial Revision (2015).

#### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Materials Sources: Submit name of imported materials source.
- C. Compaction Density Test Reports.

#### **1.6. DELIVERY, STORAGE, AND HANDLING**

- A. When necessary, store materials on site in advance of need.
- B. When fill materials need to be stored on site, locate stockpiles where designated.
  - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
  - 2. Prevent contamination.
  - 3. Protect stockpiles from erosion and deterioration of materials.

## **PART 2 PRODUCTS**

### **2.1. FILL MATERIALS**

- A. General Fill: Conforming to City of Prineville Public Works Department standard.
- B. Topsoil: See Section 31 2200.

### **2.2. SOURCE QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for general requirements for testing and analysis of soil material.
- B. If tests indicate materials do not meet specified requirements, change material and retest.
- C. Provide materials of each type from same source throughout the Work.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that survey bench marks and intended elevations for the work are as indicated.

### **3.2. PREPARATION**

- A. Identify required lines, levels, contours, and datum locations.
- B. Locate, identify, and protect utilities that remain and protect from damage.
- C. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- D. Grade top perimeter of trenching area to prevent surface water from draining into trench. Provide temporary means and methods, as required, to maintain surface water diversion until no longer needed, or as directed by the Architect.

### **3.3. TRENCHING**

- A. Notify Architect of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- B. Slope banks of excavations deeper than 4 feet (1.2 meters) to angle of repose or less until shored.
- C. Do not interfere with 45 degree bearing splay of foundations.
- D. Cut trenches wide enough to allow inspection of installed utilities.
- E. Hand trim excavations. Remove loose matter.
- F. Remove excavated material that is unsuitable for re-use from site.
- G. Remove excess excavated material from site.
- H. Provide temporary means and methods, as required, to remove all water from trenching until directed by the Architect. Remove and replace soils deemed unsuitable by

classification and which are excessively moist due to lack of dewatering or surface water control.

- I. Determine the prevailing groundwater level prior to trenching. If the proposed trench extends less than 1 foot (305 mm) into the prevailing groundwater, control groundwater intrusion with perimeter drains routed to sump pumps, or as directed by the Architect.

### **3.4. PREPARATION FOR UTILITY PLACEMENT**

- A. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.
- B. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
- C. Until ready to backfill, maintain excavations and prevent loose soil from falling into excavation.

### **3.5. BACKFILLING**

- A. Backfill to contours and elevations indicated using unfrozen materials.
- B. Employ a placement method that does not disturb or damage other work.
- C. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- D. Maintain optimum moisture content of fill materials to attain required compaction density.
- E. Granular Fill: Place and compact materials in equal continuous layers not exceeding 6 inches (150 mm) compacted depth.
- F. Soil Fill: Place and compact material in equal continuous layers not exceeding 8 inches (200 mm) compacted depth.
- G. Slope grade away from building minimum 2 inches in 10 feet (50 mm in 3 m), unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- H. Correct areas that are over-excavated.
  1. Other areas: Use general fill, flush to required elevation, compacted to minimum 97 percent of maximum dry density.
- I. Compaction Density Unless Otherwise Specified or Indicated:
  1. Under paving, slabs-on-grade, and similar construction: 95 percent of maximum dry density.
- J. Reshape and re-compact fills subjected to vehicular traffic.

### **3.6. BEDDING AND FILL AT SPECIFIC LOCATIONS**

- A. Use general fill unless otherwise specified or indicated.

### **3.7. TOLERANCES**

- A. Top Surface of General Backfilling: Plus or minus 1 inch (25 mm) from required elevations.
- B. Top Surface of Backfilling Under Paved Areas: Plus or minus 1 inch (25 mm) from required elevations.

### **3.8. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection and testing.
- B. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D1557 ("modified Proctor"), AASHTO T 180, or ASTM D698 ("standard Proctor").
- C. If tests indicate work does not meet specified requirements, remove work, replace and retest.

### **3.9. CLEANING**

- A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
- B. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

**END OF SECTION**



## **SECTION 31 2323 - FILL**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Filling, backfilling, and compacting for paving.
- B. Backfilling and compacting for stormwater infrastructure outside the building .
- C. Filling holes, pits, and excavations generated as a result of removal (demolition) operations.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 01 5713 - Temporary Erosion and Sediment Control: Slope protection and erosion control.
- B. Section 31 2200 - Grading: Removal and handling of soil to be re-used.
- C. Section 31 2200 - Grading: Site grading.
- D. Section 31 2316.13 - Trenching: Excavating for utility trenches outside the building .
- E. Section 33 4100 - Subdrainage: Filter aggregate for foundation drainage systems.

#### **1.3. DEFINITIONS**

- A. Finish Grade Elevations: Indicated on drawings.
- B. Subgrade Elevations: Indicated on drawings.

#### **1.4. REFERENCE STANDARDS**

- A. AASHTO M 147 - Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, Base and Surface Courses; 2017.
- B. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2014.
- C. ASTM C150/C150M - Standard Specification for Portland Cement; 2018.
- D. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)); 2012, with Editorial Revision (2015).
- E. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method; 2015, with Editorial Revision (2016).
- F. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup> (2,700 kN m/m<sup>3</sup>)); 2012, with Editorial Revision (2015).

#### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used, including manufactured fill.

- C. Compaction Density Test Reports.

#### **1.6. QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than ten years of documented experience.
- B. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

#### **1.7. DELIVERY, STORAGE, AND HANDLING**

- A. When necessary, store materials on site in advance of need.
- B. When fill materials need to be stored on site, locate stockpiles where designated.
  - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
  - 2. Prevent contamination.
  - 3. Protect stockpiles from erosion and deterioration of materials.

#### **1.8. WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

### **PART 2 PRODUCTS**

#### **2.1. FILL MATERIALS**

- A. General Fill: Conforming to City of Prineville Public Works Department standard.
- B. Topsoil: See Section 31 2200.

#### **2.2. SOURCE QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for general requirements for testing and analysis of soil material.
- B. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.
- C. If tests indicate materials do not meet specified requirements, change material and retest.
- D. Provide materials of each type from same source throughout the Work.

### **PART 3 EXECUTION**

#### **3.1. EXAMINATION**

- A. Verify that survey bench marks and intended elevations for the Work are as indicated.
- B. Identify required lines, levels, contours, and datum locations.
- C. Verify areas to be filled are not compromised with surface or ground water.

### **3.2. PREPARATION**

- A. Scarify and proof roll subgrade surface to a depth of 6 inches (150 mm) to identify soft spots.
- B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.
- C. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
- D. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.

### **3.3. FILLING**

- A. Fill to contours and elevations indicated using unfrozen materials.
- B. Fill up to finish grade elevations unless otherwise indicated.
- C. Employ a placement method that does not disturb or damage other work.
- D. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Granular Fill: Place and compact materials in equal continuous layers not exceeding 6 inches (150 mm) compacted depth.
- G. Soil Fill: Place and compact material in equal continuous layers not exceeding 8 inches (200 mm) compacted depth.
- H. Slope grade away from building minimum 2 inches in 10 feet (50 mm in 3 m), unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- I. Correct areas that are over-excavated.
  - 1. Other areas: Use general fill, flush to required elevation, compacted to minimum 97 percent of maximum dry density.
- J. Compaction Density Unless Otherwise Specified or Indicated:
  - 1. Under paving, slabs-on-grade, and similar construction: 95 percent of maximum dry density.
- K. Reshape and re-compact fills subjected to vehicular traffic.

### **3.4. TOLERANCES**

- A. Top Surface of General Filling: Plus or minus 1 inch (25 mm) from required elevations.
- B. Top Surface of Filling Under Paved Areas: Plus or minus 1 inch (25 mm) from required elevations.

### **3.5. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection and testing.
- B. Soil Fill Materials:

1. Perform compaction density testing on compacted fill in accordance with ASTM D1556/D1556M.
2. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D1557 ("modified Proctor").
3. If tests indicate work does not meet specified requirements, remove work, replace and retest.

### **3.6. CLEANING**

- A. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.
- B. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
- C. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

**END OF SECTION**

## **SECTION 32 1123 - AGGREGATE BASE COURSES**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Aggregate base course.
- B. Paving aggregates.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 31 2200 - Grading: Preparation of site for base course.
- B. Section 31 2316.13 - Trenching: Compacted fill over utility trenches under base course.
- C. Section 31 2323 - Fill: Topsoil fill at areas adjacent to aggregate base course.
- D. Section 31 2323 - Fill: Compacted fill under base course.
- E. Section 32 1216 - Asphalt Paving: Finish and binder asphalt courses.
- F. Section 32 1313 - Concrete Paving: Finish concrete surface course.

#### **1.3. REFERENCE STANDARDS**

- A. AASHTO M 147 - Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, Base and Surface Courses; 2017.
- B. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18 in.) Drop; 2017.
- C. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2014.
- D. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)); 2012, with Editorial Revision (2015).
- E. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method; 2015, with Editorial Revision (2016).
- F. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup> (2,700 kN m/m<sup>3</sup>)); 2012, with Editorial Revision (2015).
- G. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2015.
- H. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2011.
- I. ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2017.
- J. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth); 2017.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Compaction Density Test Reports.

#### **1.5. DELIVERY, STORAGE, AND HANDLING**

- A. When necessary, store materials on site in advance of need.
- B. When aggregate materials need to be stored on site, locate where indicated on drawings.
- C. Aggregate Storage, General:
  - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
  - 2. Prevent contamination.
  - 3. Protect stockpiles from erosion and deterioration of materials.

### **PART 2 PRODUCTS**

#### **2.1. MATERIALS**

- A. Coarse Aggregate: Coarse aggregate, conforming to City of Prineville Public Works Department standard.
- B. Fine Aggregate: conforming to City of Prineville Public Works Department standard.

#### **2.2. SOURCE QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for general requirements for testing and analysis of aggregate materials.
- B. Where aggregate materials are specified using ASTM D2487 classification, test and analyze samples for compliance before delivery to site.
- C. Where aggregate materials are specified using ASTM D2487 classification, testing of samples for compliance will be provided before delivery to site.
- D. If tests indicate materials do not meet specified requirements, change material and retest.
- E. Provide materials of each type from same source throughout the Work.

### **PART 3 EXECUTION**

#### **3.1. EXAMINATION**

- A. Verify that survey bench marks and intended elevations for the work are as indicated.
- B. Verify substrate has been inspected, gradients and elevations are correct, and is dry.

#### **3.2. PREPARATION**

- A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.

- B. Do not place aggregate on soft, muddy, or frozen surfaces.

### **3.3. INSTALLATION**

- A. Per sheet C-2.0 of the Construction Drawings.

### **3.4. TOLERANCES**

- A. Flatness: Maximum variation of 1/4 inch (6.4 mm) measured with 10 foot (3 m) straight edge.
- B. Scheduled Compacted Thickness: Within 1/4 inch (6.4 mm).
- C. Variation From Design Elevation: Within 1/2 inch (12.8 mm).

### **3.5. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection and testing.
- B. Perform compaction density testing on compacted aggregate base course in accordance with ASTM D1556/D1556M.
- C. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with AASHTO T 180.
- D. If tests indicate work does not meet specified requirements, remove work, replace and retest.
- E. Proof roll compacted aggregate at surfaces that will be under paving.

### **3.6. CLEANING**

- A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
- B. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

**END OF SECTION**





## **SECTION 32 1216 - ASPHALT PAVING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Aggregate base course.
- B. Single course bituminous concrete paving.
- C. Double course bituminous concrete paving.
- D. Surface sealer.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 31 2200 - Grading: Preparation of site for paving and base.
- B. Section 31 2323 - Fill: Compacted subgrade for paving.
- C. Section 32 1123 - Aggregate Base Courses: Aggregate base course.
- D. Section 32 1313 - Concrete Paving: Concrete curbs.
- E. Section 32 1723.13 - Painted Pavement Markings.

#### **1.3. REFERENCE STANDARDS**

- A. AASHTO M 147 - Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, Base and Surface Courses; 2017.
- B. AI MS-2 - Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types; 2015.
- C. AI MS-19 - A Basic Asphalt Emulsion Manual; Fourth Edition.
- D. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2014.
- E. ASTM D946 - Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction; 2009a.
- F. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2011.
- G. ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2017.

#### **1.4. PERFORMANCE REQUIREMENTS**

- A. Design paving and subbase at surface lot for parking.

#### **1.5. QUALITY ASSURANCE**

- A. Perform Work in accordance with Municipality of Prineville Public Work's standard.
- B. Obtain materials from same source throughout.

## **1.6. FIELD CONDITIONS**

- A. Do not place asphalt when ambient air or base surface temperature is less than 40 degrees F (4 degrees C), or surface is wet or frozen.
- B. Place bitumen mixture when temperature is not more than 15 F degrees (8 C degrees) below bitumen supplier's bill of lading and not more than maximum specified temperature.

## **PART 2 PRODUCTS**

### **2.1. REGULATORY REQUIREMENTS**

- A. Conform to City of Prineville Public Works Standard code for paving work on public property.

### **2.2. MATERIALS**

- A. Asphalt Cement: In accordance with Municipality of Prineville Public Work's standards.
- B. Aggregate for Base Course: In accordance with Municipality of Prineville Public Work's standards.
- C. Aggregate for Binder Course: In accordance with Municipality of Prineville Public Work's standards.
- D. Aggregate for Wearing Course: In accordance with Municipality of Prineville Public Work's standards.
- E. Fine Aggregate: In accordance with Municipality of Prineville Public Work's standards.
- F. Mineral Filler: Finely ground particles of limestone, hydrated lime or other mineral dust, free of foreign matter.
- G. Fiber Reinforcement: In accordance with Municipality of Prineville Public Works standards.
- H. Primer: In accordance with Municipality of Prineville Public Work's standards.
- I. Tack Coat: In accordance with Municipality of Prineville Public Work's standards.
- J. Seal Coat: In accordance with Municipality of Prineville Public Work's standards.

### **2.3. ASPHALT PAVING MIXES AND MIX DESIGN**

- A. Use dry material to avoid foaming. Mix uniformly.
- B. Base Course: Municipality of Prineville Public Work's standards.
- C. Binder Course: Municipality of Prineville Public Work's standards.
- D. Wearing Course: Municipality of Prineville Public Work's standards.
- E. Submit proposed mix design of each class of mix for review prior to beginning of work.

### **2.4. SOURCE QUALITY CONTROL**

- A. Test mix design and samples in accordance with AI MS-2.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify that compacted subgrade is dry and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.

### **3.2. BASE COURSE**

- A. See Section 32 1123.

### **3.3. PREPARATION - PRIMER**

- A. Apply primer in accordance with manufacturer's instructions and City of Prineville Public Works standards.
- B. Apply primer on aggregate base or subbase at uniform rate of 1/3 gal/sq yd (1.5 L/sq m).
- C. Apply primer to contact surfaces of curbs, gutters.
- D. Use clean sand to blot excess primer.

### **3.4. PREPARATION - TACK COAT**

- A. Apply tack coat in accordance with manufacturer's instructions and City of Prineville Public Works standard.
- B. Apply tack coat on asphalt or concrete surfaces over subgrade surface at uniform rate of 1/3 gal/sq yd (1.5 L/sq m).
- C. Apply tack coat to contact surfaces of curbs, gutters .
- D. Coat surfaces of catch basin frames with oil to prevent bond with asphalt pavement. Do not tack coat these surfaces.

### **3.5. PLACING ASPHALT PAVEMENT - SINGLE COURSE**

- A. Install Work in accordance with Municipality of Prineville Public Work's standards.
- B. Place asphalt within 24 hours of applying primer or tack coat.
- C. Place to thickness identified on the Construction Documents.
- D. Install gutter drainage grilles and frames and catch basins in correct position and elevation.
- E. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
- F. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.

### **3.6. SEAL COAT**

- A. Apply seal coat to surface course and asphalt curbs in accordance with Municipality of Prineville Public Work's standards.

### **3.7. TOLERANCES**

- A. Flatness: Maximum variation of 1/4 inch (6 mm) measured with 10 foot (3 m) straight edge.
- B. Compacted Thickness: Within 1/4 inch (6 mm) of specified or indicated thickness.
- C. Variation from True Elevation: Within 1/2 inch (12 mm).

### **3.8. FIELD QUALITY CONTROL**

- A. See Section 01 4000 - Quality Requirements, for general requirements for quality control.
- B. Provide field inspection and testing. Take samples and perform tests in accordance with AI MS-2.

### **3.9. PROTECTION**

- A. Immediately after placement, protect pavement from mechanical injury for 3 days or until surface temperature is less than 140 degrees F (60 degrees C).

**END OF SECTION**

## **SECTION 32 1313 - CONCRETE PAVING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Concrete sidewalks, stair steps, gutters, and curbs and accessible ramps.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 03 3000 - Cast-in-Place Concrete.
- B. Section 31 2200 - Grading: Preparation of site for paving and base.
- C. Section 31 2323 - Fill: Compacted subbase for paving.
- D. Section 32 1123 - Aggregate Base Courses: base course.
- E. Section 32 1216 - Asphalt Paving: Asphalt .

#### **1.3. REFERENCE STANDARDS**

- A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; 1991 (Reapproved 2009).
- B. ACI 301 - Specifications for Structural Concrete; 2016.
- C. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
- D. ACI 305R - Guide to Hot Weather Concreting; 2010.
- E. ACI 306R - Guide to Cold Weather Concreting; 2016.
- F. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2018, with Editorial Revision (2018).
- G. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2018.
- H. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2016, with Editorial Revision (2016).
- I. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2018.
- J. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2017a.
- K. ASTM C150/C150M - Standard Specification for Portland Cement; 2018.
- L. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2016.
- M. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a (Reapproved 2016).
- N. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2011.
- O. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2017.

- P. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2015.
- Q. ASTM C685/C685M - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing; 2014.
- R. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types); 2018.
- S. ASTM D1752 - Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction; 2004a (Reapproved 2013).
- T. ASTM D8139 - Standard Specification for Semi-Rigid, Closed-Cell Polypropylene Foam, Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction; 2017.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Samples: Submit two sample panels, 12 by 12 inch (300 by 300 mm) in size illustrating exposed aggregate finish.

### **PART 2 PRODUCTS**

#### **2.1. PAVING ASSEMBLIES**

- A. Comply with applicable requirements of Municipality of Prineville Public Work's standard.
- B. Concrete Sidewalks and Accessible Ramps: 3,000 psi (20.7 MPa) 28 day concrete, 4 inches (100 mm) thick, natural color Portland cement, exposed aggregate finish.
- C. Parking Area Pavement: 4,000 psi (27.6 MPa) 28 day concrete, 5 inches (125 mm) thick, 6 by 6 - W2.9 by W2.9 mesh reinforcement, wood float finish.

#### **2.2. FORM MATERIALS**

- A. Wood form material, profiled to suit conditions.
- B. Joint Filler: Preformed; non-extruding bituminous type (ASTM D1751).
  - 1. Thickness: 1/2 inch (12 mm).

#### **2.3. REINFORCEMENT**

- A. Reinforcing Steel: ASTM A615/A615M, Grade 40 (40,000 psi) (280 MPa) yield strength; deformed billet steel bars; unfinished.
- B. Steel Welded Wire Reinforcement: Plain type, ASTM A1064/A1064M; in either flat sheets or coiled rolls; unfinished.
- C. Dowels: ASTM A615/A615M, Grade 40 - 40,000 psi (280 MPa) yield strength; deformed billet steel bars; unfinished finish.

#### **2.4. CONCRETE MATERIALS**

- A. Obtain cementitious materials from same source throughout.

- B. Concrete Materials: Provide in accordance with Municipality of Prineville Public Works standards.
- C. Fiber Reinforcement: Alkali-resistant glass fibers; 1/4 inch (6 mm) length.

## **2.5. CONCRETE MIX DESIGN**

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
- B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience, as specified in ACI 301.
- C. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended by manufacturer.
- D. Fiber Reinforcement: Add to mix at rate of 1.5 pounds per cubic yard (0.89 kg per cubic meter), or as recommended by manufacturer for specific project conditions.
- E. Concrete Properties:
  - 1. Compressive strength, when tested in accordance with ASTM C39/C39M at 28 days; 4,000 psi (28 MPa).
  - 2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
  - 3. Calcined Pozzolan Content: Maximum 10 percent of cementitious materials by weight.
  - 4. Silica Fume Content: Maximum 5 percent of cementitious materials by weight.
  - 5. Water-Cement Ratio: Maximum 40 percent by weight.
  - 6. Total Air Content: 3 percent, determined in accordance with ASTM C173/C173M.
  - 7. Maximum Slump: 2 inches (50 mm).

## **2.6. MIXING**

- A. On Project Site: Mix in drum type batch mixer, complying with ASTM C685/C685M. Mix each batch not less than 1-1/2 minutes and not more than 5 minutes.
- B. Transit Mixers: Comply with ASTM C94/C94M.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Verify compacted subgrade is acceptable and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.

### **3.2. SUBBASE**

- A. Prepare subbase in accordance with Municipality of Prineville Public Works standards.

### **3.3. PREPARATION**

- A. Moisten base to minimize absorption of water from fresh concrete.
- B. Notify Architect minimum 24 hours prior to commencement of concreting operations.

### **3.4. FORMING**

- A. Place and secure forms to correct location, dimension, profile, and gradient.
- B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
- C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

### **3.5. REINFORCEMENT**

- A. Place reinforcement at top of slabs-on-grade.
- B. Interrupt reinforcement at contraction joints.
- C. Place dowels to achieve pavement and curb alignment as detailed.

### **3.6. COLD AND HOT WEATHER CONCRETING**

- A. Follow recommendations of ACI 305R when concreting during hot weather.
- B. Follow recommendations of ACI 306R when concreting during cold weather.
- C. Do not place concrete when base surface temperature is less than 40 degrees F (4 degrees C), or surface is wet or frozen.

### **3.7. PLACING CONCRETE**

- A. Place concrete in accordance with Municipality of Prineville Public Works standards.
- B. Do not place concrete when base surface is wet.
- C. Place concrete using the slip form technique.
- D. Ensure reinforcement, inserts, embedded parts, formed joints are not disturbed during concrete placement.
- E. Place concrete continuously over the full width of the panel and between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.
- F. Apply surface retarder to all exposed surfaces in accordance with manufacturer's instructions.

### **3.8. JOINTS**

- A. Align curb, gutter, and sidewalk joints.
- B. Place 3/8 inch (10 mm) wide expansion joints at 20 foot (6 m) intervals and to separate paving from vertical surfaces and other components and in pattern indicated.
  - 1. Form joints with joint filler extending from bottom of pavement to within 1/2 inch (13 mm) of finished surface.
  - 2. Secure to resist movement by wet concrete.
- C. Provide scored joints.
  - 1. At 3 feet (1 m) intervals.
  - 2. Between sidewalks and curbs.
  - 3. Between curbs and pavement.



- D. Provide keyed joints as indicated.
- E. Saw cut contraction joints 3/16 inch (5 mm) wide at an optimum time after finishing. Cut 1/3 into depth of slab.

### **3.9. EXPOSED AGGREGATE**

- A. Wash concrete surfaces to which surface retarder has been applied with clean water, and scrub with stiff bristle brush exposing aggregate to match sample panel.

### **3.10. FINISHING**

- A. Sidewalk Paving: Light broom, texture perpendicular to direction of travel with troweled and radiused edge 1/4 inch radius ( 6 mm radius).
- B. Curbs and Gutters: Light broom, texture parallel to pavement direction.
- C. Inclined Vehicular Ramps: Broomed perpendicular to slope.

### **3.11. TOLERANCES**

- A. Maximum Variation of Surface Flatness: 1/4 inch (6 mm) in 10 ft (3 m).
- B. Maximum Variation From True Position: 1/4 inch (6 mm).

### **3.12. FIELD QUALITY CONTROL**

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.
  - 1. Provide free access to concrete operations at project site and cooperate with appointed firm.
- B. Maintain records of placed concrete items. Record date, location of pour, quantity, air temperature, and test samples taken.

### **3.13. PROTECTION**

- A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.
- B. Do not permit pedestrian traffic over pavement until 75 percent design strength of concrete has been achieved.

**END OF SECTION**



## **SECTION 32 1723.13 - PAINTED PAVEMENT MARKINGS**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Parking lot markings, including parking bays, arrows, and handicapped symbols.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 32 1216 - Asphalt Paving.

#### **1.3. REFERENCE STANDARDS**

- A. FS TT-B-1325 - Beads (Glass Spheres); Retro-Reflective; 2007d (Validated 2017).
- B. FS TT-P-1952 - Paint, Traffic Black, and Airfield Marking, Waterborne; 2015f.
- C. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.
- D. FHWA MUTCD - Manual on Uniform Traffic Control Devices for Streets and Highways; U.S. Department of Transportation, Federal Highway Administration; Current Edition.

#### **1.4. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

#### **1.5. DELIVERY, STORAGE, AND HANDLING**

- A. Deliver paint in containers of at least 5 gallons (18 L) .
- B. Deliver glass beads in containers suitable for handling and strong enough to prevent loss during shipment .
- C. Store products in manufacturer's unopened packaging until ready for installation.
- D. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

#### **1.6. FIELD CONDITIONS**

- A. Do not install products under environmental conditions outside manufacturer's absolute limits.

### **PART 2 PRODUCTS**

#### **2.1. MATERIALS**

- A. Line and Zone Marking Paint: MPI (APL) No. 97 Latex Traffic Marking Paint; color(s) as indicated.
  - 1. Parking Lots: Yellow.
  - 2. Handicapped Symbols: Blue.
  - 3. Directional Arrows: White.

- B. Line and Zone Marking Paint: Refer to Section 09 9000.
- C. Paint For Obliterating Existing Markings: FS TT-P-1952; black for bituminous pavements, gray for portland cement pavements.
- D. Reflective Glass Beads: FS TT-B-1325, Type I (low index of refraction), Gradation A (coarse, drop-on); with silicone or other suitable waterproofing coating to ensure free flow.

## **PART 3 EXECUTION**

### **3.1. EXAMINATION**

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### **3.2. PREPARATION**

- A. Allow new pavement surfaces to cure for a period of not less than 14 days before application of marking materials.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Obliteration of existing markings using paint is acceptable in lieu of removal; apply the black paint in as many coats as necessary to completely obliterate the existing markings.
- D. Clean surfaces thoroughly prior to installation.
- E. Where oil or grease are present, scrub affected areas with several applications of trisodium phosphate solution or other approved detergent or degreaser, and rinse thoroughly after each application; after cleaning, seal oil-soaked areas with cut shellac to prevent bleeding through the new paint.
- F. Establish survey control points to determine locations and dimensions of markings; provide templates to control paint application by type and color at necessary intervals.

### **3.3. INSTALLATION**

- A. Begin pavement marking as soon as practicable after surface has been cleaned and dried.
- B. Do not apply paint if temperature of surface to be painted or the atmosphere is less than 50 degrees F (10 degrees C) or more than 95 degrees F (35 degrees C).
- C. Apply in accordance with manufacturer's instructions using an experienced technician that is thoroughly familiar with equipment, materials, and marking layouts.
- D. Comply with FHWA MUTCD manual (<http://mutcd.fhwa.dot.gov>) for details not shown.
- E. Apply markings in locations determined by measurement from survey control points; preserve control points until after markings have been accepted.
- F. Apply uniformly painted markings of color(s), lengths, and widths as indicated on drawings true, sharp edges and ends.
  - 1. Apply paint in one coat only.
  - 2. Wet Film Thickness: 0.015 inch (0.4 mm), minimum.

- 3. Width Tolerance: Plus or minus 1/8 inch (3 mm).
- G. Parking Lots: Apply parking space lines, entrance and exit arrows, painted curbs, and other markings indicated on drawings.
  - 1. Mark the International Handicapped Symbol at indicated parking spaces.
  - 2. Hand application by pneumatic spray is acceptable.
- H. Symbols: Use a suitable template that will provide a pavement marking with true, sharp edges and ends, of the design and size indicated.

#### **3.4. DRYING, PROTECTION, AND REPLACEMENT**

- A. Protect newly painted markings so that paint is not picked up by tires, smeared, or tracked.
- B. Provide barricades, warning signs, and flags as necessary to prevent traffic crossing newly painted markings.
- C. Allow paint to dry at least the minimum time specified by the applicable paint standard and not less than that recommended by the manufacturer.
- D. Remove and replace markings that are applied at less than minimum material rates; deviate from true alignment; exceed length and width tolerances; or show light spots, smears, or other deficiencies or irregularities.
- E. Remove markings in manner to avoid damage to the surface to which the marking was applied, using carefully controlled sand blasting, approved grinding equipment, or other approved method.
- F. Replace removed markings at no additional cost to Owner.

**END OF SECTION**



## **SECTION 33 4211 - STORMWATER GRAVITY PIPING**

### **PART 1 GENERAL**

#### **1.1. SECTION INCLUDES**

- A. Storm drainage piping, fittings, and accessories.
- B. Catch basins and Infiltration Trench.

#### **1.2. RELATED REQUIREMENTS**

- A. Section 31 2316 - Excavation: Excavating of trenches.
- B. Section 31 2316.13 - Trenching: Excavating, bedding, and backfilling.
- C. Section 31 2323 - Fill: Bedding and backfilling.
- D. Section 33 0513 - Manholes and Structures.

#### **1.3. DEFINITIONS**

- A. Bedding: Fill placed under, beside and directly over pipe, prior to subsequent backfill operations.

#### **1.4. REFERENCE STANDARDS**

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- C. ASTM A48/A48M - Standard Specification for Gray Iron Castings; 2003 (Reapproved 2016).
- D. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120; 2015, with Editorial Revision (2018).
- E. ASTM D3350 - Standard Specification for Polyethylene Plastics Pipe and Fittings Material; 2014.
- F. DIN EN 1433 - Drainage Channels for Vehicular and Pedestrian Areas - Classification, Design and Testing Requirements; Marking and Evaluation of Conformity; 2005.

#### **1.5. SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating pipe, pipe accessories.

### **PART 2 PRODUCTS**

#### **2.1. REGULATORY REQUIREMENTS**

- A. Conform to applicable code for materials and installation of the Work of this section.

## **2.2. SEWER PIPE MATERIALS**

- A. Plastic Pipe: ASTM D2467, Schedule 80, Poly Vinyl Chloride (PVC) material; inside nominal diameter per construction drawings, bell and spigot style solvent sealed joint end.

## **2.3. PIPE ACCESSORIES**

- A. Pipe Joints: Mechanical clamp ring type, stainless steel expanding and contracting sleeve, neoprene ribbed gasket for positive seal.
- B. Fittings: Same material as pipe molded or formed to suit pipe size and end design, in required tee, bends, elbows, cleanouts, reducers, traps and other configurations required.
- C. Downspout Boots: Smooth interior without boxed corners or choke points; include integral lug slots.
  - 1. Configuration: 90 degree.
  - 2. Material: Cast iron; ASTM A48/A48M; casting thickness 3/8 inch (9.5 mm), minimum.
  - 3. Finish: Manufacturer's standard factory applied powder coat finish.
  - 4. Color: To be selected by Architect from manufacturer's standard range.
  - 5. Accessories: Manufacturer's standard stainless steel fasteners, stainless steel building wall anchors, integral neoprene gaskets, and rubber coupling.

## **2.4. CATCH BASIN, TRENCH DRAIN, CLEANOUT, AND AREA DRAIN COMPONENTS**

- A. Lids and Drain Covers: Cast iron, hinged to cast iron frame.
  - 1. Catch Basin:
    - a. Lid Design: Per Construction Drawings.
    - b. Nominal Lid and Frame Size: Per Construction Drawings.

## **2.5. BEDDING AND COVER MATERIALS**

- A. Bedding: As specified in Construction Drawings.
- B. Cover: As specified in Construction Drawings.

# **PART 3 EXECUTION**

## **3.1. TRENCHING**

- A. See Section 31 2316.13 - Trenching for additional requirements.
- B. See Section 31 2316 - Excavation and Section 31 2323 - Fill for additional requirements.
- C. Hand trim excavation for accurate placement of pipe to elevations indicated.
- D. Backfill around sides and to top of pipe with cover fill, tamp in place and compact, then complete backfilling.

## **3.2. INSTALLATION - PIPE**

- A. Verify that trench cut is ready to receive work and excavations, dimensions, and elevations are as indicated on drawings.



- B. Install pipe, fittings, and accessories in accordance with manufacturer's instructions. Seal watertight.
  - 1. Plastic Pipe: Also comply with ASTM D2467.
- C. Lay pipe to slope gradients noted on construction drawings.
- D. Connect to building storm drainage system.

### **3.3. INSTALLATION - CATCH BASINS, TRENCH DRAINS AND CLEANOUTS**

- A. Form bottom of excavation clean and smooth to correct elevation.
- B. Form and place cast-in-place concrete base pad, with provision for sanitary sewer pipe end sections.
- C. Level top surface of base pad; sleeve concrete shaft sections to receive storm sewer pipe sections.
- D. Establish elevations and pipe inverts for inlets and outlets as indicated.
- E. Mount lid and frame level in grout, secured to top cone section to elevation indicated.

### **3.4. FIELD QUALITY CONTROL**

- A. Perform field inspection in accordance with COSM and City of Prineville standards.
- B. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to Owner.
- C. Infiltration Test: Test in accordance with COSM.

### **3.5. PROTECTION**

- A. Protect pipe and bedding cover from damage or displacement until backfilling operation is in progress.

## **END OF SECTION**



### **33 4211.1 - CONTECH SUBSURFACE INFILTRATION SYSTEM STANDARD SPECIFICATION**

#### **1.0 GENERAL**

- 1.1 This item shall govern the furnishing and installation of Underground Detention and Infiltration Systems for all types, sizes and designations as shown on the plans.
- 1.2 Contractor shall furnish all labor, materials, equipment and incidentals necessary to install the CMP System, appurtenances and incidentals in accordance with the Drawings and as specified herein.
- 1.3 A stormwater treatment device upstream of the CMP System is recommended as the appropriate means of pretreating for the purpose of extending the maintenance interval on the CMP System and reducing the life cycle cost. Both engineered solutions shall be provided by a single supplier/manufacturer. Filtration by wrapping a system with geotextile is not an acceptable means of pretreatment.
- 1.4 Applicable provisions of any Division shall govern work in this section.
- 1.5 American Association of State Highway and Transportation Officials (AASHTO)
  - 1.5.1 AASTHO Design Section 12 – Soil-Corrugated Metal Structure Interaction Systems
  - 1.5.2 AASHTO Construction Section 26 – Metal Culverts
  - 1.5.3 AASHTO M36 – Standard Specification for Corrugated Steel Pipe, Metallic-Coated for Sewers and Drains
  - 1.5.4 AASHTO M274 – Standard Specification for Steel Sheet, Aluminum-Coated (Type 2), for Corrugated Steel Pipe
- 1.6 American Society for Testing and Materials (ASTM)
  - 1.6.1 ASTM A760: Standard Specification for Corrugated Steel Pipe, Metallic-Coated for Sewers and Drains
  - 1.6.2 ASTM A929: Standard Specification for Steel Sheet, Metallic-Coated by the Hot-Dip Process for Corrugated Steel Pipe
  - 1.6.3 ASTM A798: Standard Practice for Installing Factory-Made Corrugated Steel Pipe for Sewers and Other Applications
  - 1.6.4 ASTM A998: Standard Practice for Structural Design of Reinforcements for fittings in Factory-Made Corrugated Steel Pipe for Sewers and Other Applications

- 1.7 Site layout drawings, product specifications, materials, corrugation, gage, hydraulic storage data and supported calculations of proposed alternatives shall be submitted to the EOR for review at a minimum of 10 working days prior to bid closing.
- 1.8 Shop drawings shall be annotated to indicate all materials to be furnished and installed under this section, and all applicable standards for materials, required tests of materials and design assumptions for structural analysis:
  - 1.8.1 Before installation of the CMP System, Contractor shall obtain the written approval of the EOR for the stormwater system and the installation drawings.
- 1.9 All proposed alternatives to the CMP System shall conform to applicable above referenced AASHTO and ASTM specifications. NCSPA provides design service life guidance for certain products up to 100 years in recommended environments.

## **2.0 MATERIALS**

- 2.1 Aluminized Type II material shall conform to the applicable requirements of AASHTO M274 or ASTM A929. CMP shall be manufactured in accordance with the applicable requirements of AASHTO M36 or ASTM A760.
- 2.2 The pipe sizes, gauges and corrugations shall be as shown on the project plans. Joint performance requirements are published in Division II, Section 26.4.2, of the current edition of the AASHTO Bridge Construction Specifications.
- 2.3 Soil tight, gravity flow, non-pressure, drainage pipe joints shall conform to AASHTO M36 and ASTM A760. Minimum joint spacing shall be 10 ft.
- 2.4 Overlapping of adjacent pipes are not permitted and appropriate banding must be utilized in order to properly secure individual pipes in place.
- 2.5 Integral End Sections: Each barrel of the CMP System shall either be connected to a fitting composing a manifold for hydraulic distribution or have an integrated bulkhead to resist loading at the end/start of the barrel, end cap sections shall not be permitted.
- 2.6 Material selected shall be flame resistant and capable of retaining 80% of strength when subjected to a temperature of 400 degrees Fahrenheit for one hour.
- 2.7 All fittings shall be manufactured prior to arriving on the jobsite to ensure structural integrity. Fitting reinforcement shall be in accordance with ASTM A998 and reinforcing details. Bulkhead design and fabrication does not vary with differing coatings on the steel components.
- 2.8 The manufacturer of the CMP System shall be one that has regularly been engaged in the engineering design and production of these systems for at least fifteen (15) years and which has a history of successful production, acceptable to the EOR. In accordance with the Drawings, the CMP System shall be supplied by:

Contech Engineered Solutions  
9025 Centre Pointe Drive  
West Chester, OH, 45069  
Tel: 1 800 338 1122

2.9 Sampling, testing, and inspection of metal sheets and coils used for manufacturing the CMP System shall be in accordance with to the above applicable referenced specifications. All fabrication of the product shall occur within the United States.

### **3.0 PERFORMANCE**

- 3.1 The CMP System proposal shall be sized in accordance to the design provided and approved by the Engineer of Record (EOR). Any Contractor deviating from the design shown on the plans, to include: material, footprint, etc., shall provide to the EOR a summary report on stage-storage curves, design calculations, HydroCAD modeling and engineering drawings.
- 3.2 The CMP System shall comprise of manhole access with minimum dimensions of 24 inches diameter to provide adequate inspection and maintenance without restrictions and obstructions to entry into interior of the CMP System. Manholes shall be provided to allow full entry into and visual inspection of the complete CMP System, at a minimum as to allow full maintenance of the CMP System. Cleanouts or inspection ports are not acceptable access points for maintenance and inspection nor are any other alternatives which do not allow for full entry into the system.
- 3.3 CMP spacing, gage (thickness) and stone base thickness can be altered with consultation from Contech Engineered Solutions, LLC.
- 3.4 The CMP System shall be designed for a minimum HS-20/HS-25 final live loading conditions. The CMP System shall meet HS-20/HS-25 loading requirements with a minimum of 12-inches of cover to bottom of flexible pavement for pipe spans less than or equal to 96 inches and 18 inches of cover to bottom of flexible pavement for pipe spans greater than 96 inches.
- 3.5 The CMP System shall be designed so as the hydraulic grade line will increase evenly throughout whereas transverse movement from one storage compartment to another shall not be permitted. All storage compartments shall be connected via manifold (or connecting pipe) versus by transporting stormwater through stone.
- 3.6 A stormwater pretreatment device is **recommended** upstream of the CMP system as follows:
  - 3.6.1 Infiltration: Where feasible, the selected stormwater treatment device upstream of an infiltration system shall be a filter system and have General Use Level Designation (GULD) for Basic Treatment by the Washington State Department of Ecology or demonstrate equivalent performance in independently verified field testing following a peer reviewed testing protocol, and must be sized consistent with the system producing those results.

- 3.6.2 Detention: Where feasible, the selected Stormwater treatment device upstream of a detention system shall be a separator system and have GULD for Pretreatment by the WADOE or demonstrate equivalent performance in independently verified field testing following a peer reviewed testing protocol, and must be sized consistent with the system producing those results.
- 3.6.3 Selected pretreatment stormwater device shall incorporate a physical barrier capable of capturing and retaining trash and debris (i.e.: floatable and neutrally buoyant materials) for all flows up to the treatment capacity of the device.
- 3.6.4 The application of wrapping a system with geotextile of any branding or material type, that allows the passage of stormwater, shall not be regarded as an acceptable treatment or pretreatment device.
- 3.6.5 The manufacturer of the selected Stormwater treatment device shall have been regularly engaged in the engineering design and production of systems for the physical treatment of Stormwater runoff for 15 years.
- 3.6.6 In order to not restrict the Owner's ability to maintain the stormwater pretreatment device, the minimum dimension providing access from the ground surface to the sump chamber shall be 20 inches in diameter.

#### 4.0 EXECUTION

- 4.1 The CMP System installation shall be in accordance with AASHTO Standard Specifications for Highways Bridges, Section 26, Division II or ASTM A798 and in conformance with the project plans and specifications.
- 4.2 The CMP System shall be installed in accordance with the manufacturer's recommendations and related sections of the contract documents. Handling & assembly shall be in accordance with National Corrugated Steel Pipe Association's (NCSPA) recommendations.
- 4.3 For temporary construction vehicle loads, an extra amount of compacted cover may be required over the top of the pipe. The Height-of-Cover shall meet the minimum requirements shown in the table below. The use of heavy construction equipment necessitates greater protection for the pipe than finished grade cover minimums for normal highway traffic.

**Minimum Cover (ft) Requirements**

Pipe Span (inches)	Axle Loads (kips)			
	18 - 50	50 - 75	75 - 110	110 - 150
12 - 42	2.0	2.5	3.0	3.0
48 - 72	3.0	3.0	3.5	4.0
78 - 120	3.0	3.5	4.0	4.0
126 - 144	3.5	4.0	4.5	4.5

- 4.4 Minimum cover may vary, depending on local conditions. The contractor must provide the additional cover required to avoid damage to the pipe. Minimum cover is measured from the top of the pipe to the top of the maintained construction roadway surface.
- 4.5 Refer to the Contech's Corrugated Metal Pipe Detention Design Guide for additional guidance regarding installation, inspection and maintenance.
- 4.6 The contractor shall follow Occupational Safety and Health Association (OSHA) guidelines for safe practices in executing the installation process in accordance with the manufacturer/supplier installation recommendations.
- 4.7 Backfill material shall be placed in 8 inch loose lifts and compacted to 90% AASHTO T99 standard proctor density.
- 4.8 Supplier will conduct an on-site preconstruction meeting with the contractor prior to the scheduled delivery date of the CMP System.