



Project Manual

Shared Use Path on SR270 to Stadium Way

**Washington State University
Pullman, WA**

Project No. 9705-2018
Issued 11/5/2022
Washington State University
Facility Services, Capital

The Architect or Engineer Stamp on this page applies to all portions of the Specifications below.

CIVIL ENGINEERS:

Keller Associates, Inc.
733 5th Street, Suite A
Clarkston, WA 99403
(509) 295-6095 (office)
(208) 669-0232 (cell)
(509) 295-6104 fax



Specification Divisions 02 40 00 - 32 31 13
(except Sections 26 00 00 to 26 56 00, 32 84 00, 32 92 00, and 32 93 00)

ELECTRICAL ENGINEERS:

Keller Associates, Inc.
131 SW 5th Avenue, Suite A
Meridian, ID 83642
(208) 288-1992
(208) 288-1999 fax



Specification Divisions 26 00 00 - 26 56 00

LANDSCAPE ARCHITECT:

Bernardo Wills Architects
153 S Jefferson Street
Spokane, WA 99201
(509) 838-4511

Specification Divisions 32 84 00, 32 92 00, and 32 93 00



END OF ARCHITECTURAL / ENGINEERING STAMPS

CONDITIONS OF THE CONTRACT

00 11 13	Advertisement for Bids
00 21 13	Instructions to Bidders
00 42 13	Form of Proposal Part A: Base Bid & Alternate Bids
00 50 00	Agreement between Owner and Contractor
00 72 00	General Conditions for Washington State Facilities Construction with Washington State University Amendments
	Attachment A: Reasonable Certainty of Non-Disturbance of Asbestos

DIVISION 01 GENERAL REQUIREMENTS

01 11 00	Summary of Work
01 26 00	Change Order Procedures
01 29 00	Applications for Payment
	Current Prevailing Wage Rates
01 29 73	Schedule of Values
01 31 19	Project Meetings
01 31 23	Coordination
01 32 13	Progress Schedule
01 32 33	Construction Photographs
01 33 00	Submittals
01 35 16	Alteration Procedures
01 41 00	Regulatory Requirements
01 41 19	Special Provisions
01 45 00	Quality Control
01 45 23	Testing Laboratory Services
01 45 34	Contract Performance Evaluation Program
01 50 00	Construction Facilities & Temporary Controls
01 58 00	Project Identification Sign
01 60 00	Material and Equipment
01 70 00	Project Close-Out
01 71 23	Field Engineering
01 74 19	Construction Waste Management
01 78 23	Operation & Maintenance Manuals
01 78 39	Project Record
01 81 19	Indoor Air Quality Management Plan
01 91 00	Commissioning Requirements

DIVISION 02 EXISTING CONDITIONS

02 41 00	Demolition
----------	------------

DIVISION 03 CONCRETE

03 30 00	Cast-In-Place Concrete
----------	------------------------

DIVISION 26 ELECTRICAL

26 00 00	Electrical
26 05 19	Electrical Power Conductors
26 05 33	Raceway Boxes and Electrical Systems
26 28 00	Overcurrent Protective Devices
26 56 00	Exterior Lighting

DIVISION 31 EARTHWORK

31 00 00	Earthwork
31 11 00	Clearing and Grubbing
31 23 16.26	Rock Removal
31 23 33	Trenching and Backfilling

DIVISION 32 EXTERIOR IMPROVEMENTS

32 12 16	Asphalt Paving
32 13 13	Concrete for Exterior Improvements
32 17 23	Pavement Markings
	Right Turn Channelization
	Bicycle Lane Symbol Layout
	Crosswalk Layout
	Longitudinal Marking Patterns
32 17 26	Tactile Warning Surfacing
32 31 13	Chain Link Fences and Gates
32 84 00	Planting Irrigation
32 92 00	Turf and Grasses
32 93 00	Plants
	WSDOT General Permit (Application and Permit)
	Steel Sign Support Types ST-1 – ST-4 Installation Details

Attachment A: WSDOT Permit Application for "Work Zone" Signage

Attachment B: WSDOT Installation Details Standard Plan G-24.50-05

END OF SECTION 00 01 10

Washington State University
Shared Use Path on SR270 to Stadium Way
Pullman, WA

Sealed bids are being requested by the Board of Regents of Washington State University, for the above referenced project.

Project Scope:

Install a concrete paved path that alternates between 10 and 12ft wide with 2ft gravel shoulders approximately 1,600 LF from the intersection of SR270 and Bishop Blvd westward to Stadium Way. Install new landscaping and irrigation along path, and pedestrian lights along 400 LF of path. Construction start anticipated to be May of 2023. Contract time shall be 90 days from Notice to Proceed to Substantial Completion. Proposal MUST BE based on this Contract Time.

Project Location: Along SR270 between Bishop Blvd and Stadium Way Intersections.

Bid Estimate: \$550,000- 600,000

Alternate 1: Install 3" asphalt pavement in lieu of concrete pavement.

Bids will be received prior to 2:00 p.m. Tuesday, December 13, 2022; either by email to contracts@wsu.edu or in hard copy at McCluskey Services Building, 2425 East Grimes Way, Pullman, WA, 99164. Proposals will then be publicly opened and read aloud at 2:30 p.m. by <https://wsu.zoom.us/j/91059041036?pwd=MHh4b3RnWWlrcmhrL3ZDTi9tM3BxZz09&from=add-on> ; or Phone 253-215-8782 and entering Meeting ID 910 5904 1036. Attendance in person is not allowed.

A mandatory pre-bid conference for general contractors will be held at 9:30 a.m. on Monday, November 30, 2022 at McCluskey Services Building, Room 173. Attendees may also attend by Zoom <https://wsu.zoom.us/j/96196816525?pwd=dnJvQmd0SnJlL3Z3UnB3Q3pWNVczZz09&from=ad-on> or Phone 253-215-8782 and entering Meeting ID 961 9681 6525 and Passcode 01530

Parking on campus is enforced 24 hours a day, every day. It is bidder's responsibility to obtain parking permits to attend pre-bid meetings, site visits, and bid openings. Daily permit rates may be found at: <http://transportation.wsu.edu/TempFees.html>. Identify the meeting and project when obtaining the permit to receive appropriate rates.

Bid documents may be obtained at <https://facilities.wsu.edu/facilities-services-capital/contractors/>. Contractors who would like to be included on the Planholder's list shall either attend the pre-bid meeting or request to be added by emailing contracts@wsu.edu.

Printing Disclaimer: The bidding documents are available for all interested bidders and plancenters. The University does not provide printing services; it is the bidder's responsibility to print the drawings to the appropriate scale indicated. We encourage the use of professional printing shops.

Owner reserves the right to reject any and all bids and to waive any informalities or irregularities in the bids received.

Maja S. Huff
509-335-9082
Contracts@wsu.edu
Facilities Services
Washington State University

END OF SECTION 00 11 13

PART 1 GENERAL

1.01 PROJECT IDENTIFICATION

- A. Refer to the Advertisement for Bids for Project identification, availability of bidding documents, Prebid Conference, and Contract completion date. Refer to Summary of Work, Section 01 11 00, for a brief description of the Work.

1.02 BIDDER QUALIFICATIONS

- A. Contractor Registration:
 - 1. Bidders subject to the Contractor's Registration Act (RCW Chapter 18.27) must show their State of Washington Contractor's license number on the Form of Proposal. In addition, bidders are cautioned to verify that all subcontractors submitting bids are also registered and licensed in accordance with the laws of the State of Washington. Owner is prohibited by virtue of RCW 39.06.010 from executing any Contract for public works with any contractor who is not registered or licensed in accordance with the laws of this state. Prior to submitting a bid, bidder must obtain an appropriate clearance and license to do business in the State of Washington as follows:
 - a. Contractor's License: Make license application to the Department of Labor and Industries, Contractor's Registration, P.O. Box 7689, Olympia, Washington 98504.
 - b. Registration Number: Out-of-State Contractors must obtain a registration number and permission to do business in the State of Washington from the Secretary of State, Olympia, Washington 98501.
 - c. Other Registrations: Register with the State Department of Revenue as a contractor engaging in business in this state and register with the State Department of Labor and Industries and the Employment Security Department.
 - 2. Payment and Performance Bonds:
 - a. Bidders must be able to furnish satisfactory separate Payment and Performance Bonds for full amount of the initial Contract Sum, plus sales tax.

1.03 EXAMINATION OF SITE AND CONTRACT DOCUMENTS

- A. Before submitting a bid or proposal, bidders shall carefully examine the Contract Documents, visit the Project site, and fully inform themselves as to all existing conditions and limitations, and shall include in their bid or proposal a sum to cover the cost of all items included in the Work, and shall rely on their own examination in making their bid or proposal. No change in the Work, the

Contract Sum, or the Contract Time will be allowed for issues that would have been reasonably apparent by the foregoing examination.

- B. Bidder acknowledges that it has satisfied itself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the Project site, including all exploratory work done by Owner, as well as from the Drawings and Specifications made a part of the Contract Documents.
- C. Bidder acknowledges that adjoining areas will be in normal course during the Work. Bidder should anticipate pedestrian and traffic congestion, limited parking, and the need to coordinate all Work with ongoing operations.
- D. Owner assumes no responsibility for any conclusions or interpretations made by bidder based on the information made available by Owner. Should a bidder find discrepancies or omissions in the Drawings or Specifications, or should bidder be in doubt as to their meaning, bidder shall at once notify Owner. If appropriate, Owner will send written instructions to all bidders by addenda. Questions received less than 7 Days before the time of bid opening may not be answered. All issued addenda shall be incorporated into these Contract Documents.

1.04 PREBID CONFERENCE

- A. All bidders are required to attend a pre-bid conference either in person for virtually. Refer to the Advertisement for Bids for the date, time and location.
- B. Parking on campus is enforced 24 hours a day, every day. It is bidder's responsibility to obtain parking permits to attend pre-bid meetings, site visits, and bid openings. Due to the possibility of parking at multiple locations on campus, bidders are advised to consider obtaining Orange Temporary Permits. Go to <http://transportation.wsu.edu/TempFees.html> for more information about parking permits.
- C. The University is requiring that Zoom be downloaded and installed via a computer client rather than connecting through a web browser plugin. The computer client can be found here: <https://support.zoom.us/hc/en-us/articles/207373866-Zoom-Installers>

1.05 CLARIFICATIONS

- A. Should bidders find discrepancies in, omissions from, or unclear information within the Contract Documents, they should notify Owner at once. Owner shall issue a written instruction in the form of an addendum to all bidders. Neither the Owner nor Architect/Engineer will be responsible for any oral instructions. Questions received less than 7 Days before bid opening may not be answered. All addenda issued prior to the opening of bids will be incorporated into the Contract.

1.06 SPECIFIED PRODUCTS

- A. Bids must be based upon items identified in the Specifications or approved substitutions. In certain cases, specific items have been named because of operational or maintenance considerations; approval of substitutions should not be assumed.
- B. Requests for approval of substitutions must be made in writing and received by Owner at least 7 Days prior to the date of bid opening. Said request must include complete descriptions, technical data, and performance records. Any approval of the proposed substitution will be made by addendum issued to all bidders.
- C. To submit substitution requests prior to Bid opening:
 - 1. Only one substitution request per bidder will be considered for each product.
 - 2. Requests for substitutions shall provide sufficient data to allow Owner to evaluate the suitability of the proposed product. Bidder must clearly identify product and model number of proposed substitutions.
- D. By requesting a substitution, bidder represents and warrants that (1) it has personally investigated the proposed material or product and determined that it is equal or better in all respects to that specified, (2) the same or better warranty will be provided for the substitution, (3) it has coordinated with affected subcontractors, (4) the substitution will not impact other parts of the Work, (5) the aggregate costs associated with the substitution actually reduces its bid amount, (6) all costs associated with the substitution are included in its bid, and (7) it waives any known or unknown future claim for an increase in the Contract Sum or Contract Time associated with the substitution.
- E. Owner retains full discretion over whether to approve a substitution, and Owner's approval does not relieve bidder of the above requirements.

1.07 TAXES

- A. State of Washington Sales Tax shall not be included in the bid price, except that the retail sales tax upon sales and rentals to prime contractors and subcontractors of tools, cranes, air compressors, bulldozers, lubricating oil, sandpaper, form lumber, and similar items of material and equipment which are primarily for use by the bidder rather than for resale as a component part of the finished work, shall be included in the bid price. (See WAC 458-20-170 (State Department of Revenue Rule 170))
- B. Sales tax applicable to the Contract Sum will be added to the Contract Sum by Owner at the time the Contract (Section 00 50 00) is written and shall be paid to Contractor. Contractor shall then remit payment for the sales tax to the State Department of Revenue in conformance with the law.

1.08 FILING FEES

- A. Applicable state laws concerning prevailing wages, hours, workers' compensation, and other conditions of employment are called to the attention of bidders for their compliance. Bidders shall include in their bid any and all fees, including filing fees, required to comply with applicable labor laws.

1.09 PAYMENT AND PERFORMANCE BONDS

- A. Upon award of the Contract, the successful bidder will be required to provide Owner with satisfactory separate payment and performance bonds. Cost of bond premiums must be included in the bidder's proposal.

1.10 FORM OF PROPOSAL

- A. Proposals must be formatted in accordance with the following:
 - 1. Bidder must utilize the Form of Proposal, examples of which are included in the Contract Documents; all numbers must be clearly and legibly stated both in writing and in figures; and signatures must be in longhand.
 - 2. Bids must not contain any recapitulation of the Work to be done.
 - 3. Bidders must include prices for all Alternate Bid items if they are included in the Form of Proposal.
 - a. Bidders shall bid upon all Alternates indicated in the Form of Proposal. When bidding on alternates for which there is no charge, bidder shall write the words "No Charge" or some similar designation in the space provided on the Form of Proposal. If a bidder fails to bid an alternate, or notes "no bid," it will be construed as meaning that there will be no change in the Contract Sum and that the alternate is included in the Contract Sum.
 - 4. Bids shall be received either electronically or in hard copy:
 - a. Electronic Bids: Bidders may submit their bid via email to contracts@wsu.edu prior to the bid submission deadline. The emailed bid must include all documents that would have normally been submitted in the sealed envelope, including but not limited to the Form of Proposal and bid bond, in either PDF or Image format.
 - 1) The official clock for receipt of electronic bids will be the time and date stamp by WSU email services, not bidders email services.
 - b. Hard Copy Bids: Each part of the Form of Proposal must be sealed in its own opaque envelope and marked "Proposal - Shared Use Path on SR270 to Stadium Way". Bidders name shall appear on the outside of this sealed envelope. All bids are to be delivered or mailed to Facilities Services, P.O. Box 641150, McCluskey Services Building, Washington State University,

Pullman, WA 99164-1150. If mailed, the Bid envelope shall be enclosed in another envelope for mailing.

- 1) An official clock, at the office location designated for receipt of bids, will be designated by Owner for determining the timely receipt of each bid.
- c. Bidders are solely responsible for delivery of their proposals at the specified location and before the specified time set for receipt of bids.
5. Bids will be received on the dates and at the times indicated in the Advertisement for Bids.
6. Proposals received and determined untimely by Owner, may be considered as non-responsive and hard copy bids will be returned to bidder unopened, or notification will be made by email for electronic bids.
7. Bids will be received until the respective times indicated in the Advertisement for Bids. They must be received prior to the respective times stated; i.e., where bids for Part A are required until 2:00 p.m., all bids received by 1:59:59 p.m. are timely; all bids received on or after 2:00:00 p.m. are untimely.
8. Proposals shall consist of the following components:
 - a. Proposal: Completed Part A proposal indicating the following:
 - 1) Base Bid and Alternate Bid (if any) amounts;
 - 2) Acknowledgment of Addenda received;
 - 3) Signature, Corporate Identification, and Contractor License number; and
 - 4) Bid Security to be attached to Part A proposal form.
9. All proposals will remain sealed/unshared until the bid opening. Bidders may, at their option, submit a single fully completed proposal, together with the required bid security, up until the time set for receipt of the first submittal.

1.11 BID ALTERNATES, ALLOWANCES AND UNIT PRICES

- A. Bid Alternates, Allowances, and Unit Prices adjust the Project scope by adding, deleting, or modifying specific parts of the Work as stated hereinafter.
- B. An Alternate is an amount proposed by bidders and stated on the Bid Form for certain construction activities defined in the bidding documents that may be added to or deducted from the Base Bid amount and/or the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation

methods described in the Contract Documents.

1. Each bidder shall submit, on the Form of Proposal, an amount for each Bid Alternate stating the difference in cost from the Base Bid amount for adding, deleting, or modifying specific materials and/or construction.
 2. The difference in cost shall include all deletions, additions, and adjustments to all trades as may be necessary by each modification.
 3. Only Alternates authorized by these specifications or pursuant to addenda will be considered.
- C. An Allowance is an amount established in the Contract Documents for inclusion in the Contract Sum to cover the cost of prescribed items not specified in detail sufficient to estimate at time of bid.
1. Each bidder shall include in the Base Bid amount the amount for each Allowance as identified in the bidding documents.
- D. A Unit Price is an amount as a price per unit of measurement for materials or services added or deleted from the Base Bid amount.
1. Each bidder shall submit on the Bid Proposal Form, an amount for each Unit Price stating the difference per unit or measurement for materials or services added or deleted from the Base Bid amount.
 2. The Unit Price stated shall be used as the amount for either adding or deleting the item per unit of measurement from the Work.
 3. The Unit Price amounts submitted on the Form of Proposal shall be used as the cost per unit of measurement for the entire duration of the Contract.

1.12 BID GUARANTEE

- A. Bidder shall furnish a bid guarantee in the form of a cashier's check or bid bond made payable to the Board of Regents of Washington State University for an amount equal to at least 5% of the total Base Bid amount, as evidence of good faith and as a guarantee that, if awarded the Contract, the bidder will execute the Contract and provide payment and performance bonds as required.
1. Electronic submission of the Bid Guarantee shall constitute full submittal as if delivered in hard copy.
- B. Should the successful bidder fail to enter into a Contract and furnish satisfactory bonds within 10 Days after its proposal has been accepted, the bid security shall be forfeited as liquidated damages.
- C. Owner reserves the right to hold the bid guarantee of the 3 lowest bidders until the successful bidder has entered into a contract and furnished required bonds.

1.13 MWBE PARTICIPATION

- A. Washington State University is committed to the enhancement of opportunities for minority and women owned and controlled businesses in public contracting. The use or solicitation of minority and women's business enterprise firms is expressly encouraged.

1.14 MODIFICATION OF PROPOSALS

- A. Modifications to proposals already submitted will be permitted only if requested in writing over the signature of the bidder and provided such requests are received prior to the time set for receipt of bids.
- B. The original Form of Proposal will remain unopened until bid opening. Modifications in the form of facsimile transmissions will not be accepted.
- C. Withdrawal of proposals will be permitted only if requested in writing over the signature of the bidder and provided such requests are received prior to the time set for receipt of bids.
- D. Withdrawal requests in the form of facsimile transmissions will not be accepted.
- E. After the scheduled closing time for the receipt of Form of Proposals, no bidder will be permitted to withdraw a proposal unless said award is delayed for a period exceeding 60 Days.

1.15 ALTERATIONS PROHIBITED

- A. Except as otherwise provided herein, Forms of Proposal which are incomplete, or which are conditioned in any way, or which contain items not called for in the Proposal Form, or which are not in conformity to the law, may be rejected.
- B. The Form of Proposal invites bids on specific Drawings and Specifications. Only the amounts and information asked for on the Form of Proposal furnished will be considered.

1.16 BID PROTEST PROCEDURES

- A. A bidder protesting for any reason the bidding documents, a bidding procedure, the University's objection to a bidder or a person or entity proposed by the bidder, including but not limited to, a finding of non-responsibility, the award of the Contract or any other aspect arising from, or relating in any way to, the bidding, shall file a written protest with the University within two (2) business days of the event giving rise to the protest. (Intermediate Saturdays, Sundays, and legal holidays are not counted as business days.) The written protest shall include the name of the protesting bidder, the title of the bid under which the protest is submitted, a detailed description of the specific factual and legal grounds for the protest, copies of all supporting documents, evidence that the apparent low bidder has been given notice of the protest, and the specific relief requested. The written protest shall be sent by email to contracts@wsu.edu.

- B. Upon receipt of the written protest, the University will consider the protest. The University may, within three (3) business days of the University's receipt of the protest, provide any other affected bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting bidder and the University, the Assistant Vice President for Facilities Services, Capital of the University, or her or his designee, will review the issues and promptly furnish a final and binding written decision to the protesting bidder, and any other affected bidder(s), within six (6) business days of the University's receipt of the protest. (If more than one (1) protest is received, the University's decision will be provided within six (6) business days of the University's receipt of the last protest.) If no reply is received from the University during the six (6) business-day period, the protest will be deemed rejected.
- C. Failure to comply with these protest procedures will render a protest waived.
- D. Timely and proper compliance with, and exhaustion of, these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

1.17 LOW RESPONSIBLE BIDDER

- A. It is the intent of Owner to award the Contract to the low responsible bidder. Before award, the bidder must meet the following bidder responsibility criteria to be considered a responsible bidder. The bidder may be required by Owner to submit documentation demonstrating compliance with the criteria. Bidder must:
 - 1. Have a current certificate of registration in compliance with chapter 18.27 RCW, which must have been in effect at the time of bid submittal;
 - 2. Have a current Washington Unified Business Identifier (UBI) number;
 - 3. If applicable:
 - a. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
 - b. Have a Washington Employment Security Department number, as required in Title 50 RCW;
 - c. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
 - 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3).
 - 5. Not have been found out of compliance by the Washington State Apprenticeship and Training Council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the first date of advertising for this project.

6. Not have been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries, or through a civil judgment entered by a court of limited or general jurisdiction, to have willfully violated, any provision of chapter 49.46, 49.48, or 49.52 RCW, as defined in RCW 49.48.82.
- B. In addition to the bidder responsibility criteria above, bidder must also meet the following supplemental bidder responsibility criteria applicable to the Project:
1. The ability, capacity, and skill of bidder to perform the service required;
 2. The experience and efficiency of bidder;
 3. Whether bidder can perform the Contract within the time specified;
 4. The satisfactory completion of previous contracts or services;
 5. Such other information having a bearing on the decision to accept a bid proposal.
- C. Whenever Owner evaluates Contractor's responsibility, the foregoing may be taken into account. In addition to Contractor's experience, evaluation of bidder's responsibility will also be based on the documented experience of the Project Manager, Project Engineer, and the Superintendent proposed for the Project. A minimum of three projects of comparable size and scope will be required for bidder.
- D. Within 48 hours of receipt of request, apparent low bidder will provide such information about its team as Owner determines to be reasonably necessary to evaluate the responsibility of the bidder. Failure to reply with requested information will render a bidder non-responsible at Owner's option. At minimum, a bidder shall provide:
1. A financial statement;
 2. List of projects currently under construction, including current contract amount and status of each;
 3. Names and resumes of proposed Project Manager, Project Engineer, and Superintendent;
 4. Name of bonding company/agent; and
 5. References including project and owner name, a project contact, and project contact telephone number.
- E. As evidence that bidder meets the bidder responsibility criteria, the apparent low bidder must submit documentation as may be required above to the Owner within 48 hours of the bid submittal deadline. Owner reserves the right to request such documentation from other bidders also.
- F. Owner will review Contractor's past Contract Performance to assist in evaluating the contractor's qualifications and proven ability to successfully perform future

contracts only when past performance has been previously documented via the Contract Performance Program.

- G. If Owner determines bidder does not meet the bidder responsibility criteria above and is therefore not a responsible bidder, Owner shall notify bidder in writing with the reasons for its determination. If bidder disagrees with this determination, it may appeal the determination within 24 hours of receipt of Owner's determination by presenting additional information to Owner. Owner will consider the additional information before issuing its final determination. If the final determination affirms that bidder is not responsible, Owner will not execute a Contract with any other bidder until 2 business days after the bidder determined to be not responsible has received the final determination.

1.18 CONTRACT AWARD

- A. Owner intends but is not required to enter into a contract with the successful bidder, for all Work called for in the Contract Documents.
- B. The determination of the successful bidder will be made on the basis of the sum of the Base Bid together with Owner-selected Alternates.
- C. The responsibility of bidder and its subcontractors will be considered in making the award. Owner reserves the right to reject any or all bids and to waive informalities advantageous to Owner and/or the protection of the public interest.
- D. Reinstatement of Bid Alternate not initially selected shall be in accordance with provisions of the Bid Proposal Form of Proposal.

1.19 CONTRACT FORMS

- A. Owner's standard form Contract is included with the Contract Documents.

END OF SECTION 00 21 13

Washington State University
Shared Use Path on SR270 to Stadium Way
Pullman, WA

Refer to Instructions to Bidders for bid submittal procedures.

Bidder's Firm Name: _____ Date: _____

To: Facilities Services, Capital
McCluskey Services Building, P.O. Box 641150
Washington State University
Pullman, Washington 99164-1150

Pursuant to and in compliance with the Advertisement for Bids and the Instructions to Bidders, the Bidder, having carefully examined the Contract Documents entitled "Shared Use Path on SR270 to Stadium Way" and having visited the Project site and examined the conditions affecting the Work, hereby proposes and agrees to provide all labor, materials, equipment, services, and incidentals necessary to complete the Work for the following stipulated sums:

A. BASE BID

_____ DOLLARS (\$_____),

B. UNIT PRICES – NOT USED

C. ALTERNATES

The Bidder proposes to modify the Base Bid by deleting from, adding to or otherwise modifying the Work as further described by the Contract Documents for the following stipulated sums:

Alternate No. & Description

Alternate No. 1 – Install 3" asphalt pavement in lieu of concrete pavement.

_____ DOLLARS (\$_____),

For Alternates, which do not affect the Base Bid, indicate a zero (0) in the space provided for the Alternate.

D. REINSTATEMENT OF BID ALTERNATES

The Bidder agrees that Owner has the right to reinstate any Alternate not incorporated in the original Contract, for the sum originally proposed, provided Owner notifies the Bidder within 60 Days of Notice to Proceed.

E. SALES TAX

The Bidder agrees that the amounts indicated in the proposal do not include Washington State and local sales taxes except as required by the Instructions to Bidders.

F. CONTRACT PROVISIONS

Should the Bidder be notified of the acceptance of this proposal within 60 Days from the date set for the opening thereof or at any time thereafter before this proposal is withdrawn, the bidder agrees to execute a Contract for the Work and to furnish the required bonds.

1. TIME OF COMPLETION

The bidder agrees, if awarded a Contract for the Work, to complete the Work within the Contract Time specified.

2. LIQUIDATED DAMAGES

The bidder agrees that time is of the essence of the Contract and acknowledges that the amount of damages specified is a measure of the damages which the Owner will sustain should the Bidder fail to complete the Work within the Contract Time.

G. BID GUARANTEE

The Bidder agrees that the bid guarantee accompanying the Part A Form of Proposal is left in escrow with Owner, that the amount of the guarantee is the measure of the damages that Owner will sustain by failure of the bidder to execute a Contract for the Work and furnish required bonds, and that if the bidder fails to deliver said documents within 10 Days after receipt of notice of award to the bidder, the bid guarantee shall become the property of Owner.

H. MINORITY AND WOMEN'S BUSINESS ENTERPRISE (MWBE) PARTICIPATION

Owner is committed to the enhancement of opportunities for minority and women owned and controlled firms in public contracting. While neither required, nor a part of bidder responsiveness, the use or solicitation of minority and women business enterprises is expressly encouraged.

I. ADDENDA

The bidder hereby acknowledges receipt of Addendum by number(s):

J. PREVAILING WAGE CERTIFICATION

The bidder has not been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries, or through a civil judgment entered by a court of limited or general jurisdiction, to have willfully violated, any provision

of chapter 49.46, 49.48, or 49.52 RCW, as defined in RCW 49.48.82.

K. DECLARATION

The bidder represents and warrants that he/she possess the authority to sign for and bind bidder.

The Bidder declares under penalty of perjury under the laws of the State of Washington, that all of the foregoing information as recited is true and correct to the best of his/her knowledge.

Bidder's Firm Name: _____

Signed By: _____ Official Title: _____

Print Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone: _____ Fax: _____

State of Washington Contractor's License Number: _____

Federal Tax Identification Number: _____

Email Address: _____

The firm represented by the above signature is a:

Sole Proprietorship _____
Partnership _____
Corporation _____
Other _____

State of Incorporation _____

END OF SECTION 00 42 13

Shared Use Path on SR270 to Stadium Way

Agreement between Owner and Contractor (Fixed Contract Sum)

This AGREEMENT is effective as of the date of the first signature on the Agreement so long as all other parties' authorized signatories have also executed the Agreement. This Agreement is made by and between the following parties in connection with the Project identified below.

OWNER: Washington State University
c/o Facilities Services, Capital
P.O. Box 641150
Pullman, WA 99164-1150

CONTRACTOR: [To be determined]

ARCHITECT (A/E): Keller Associates
733 5th Street, Suite A,
Clarkston WA 99403

PROJECT: Shared Use Path on SR270 to Stadium Way
State Route 270
Pullman, WA 99164

In consideration of the mutual covenants and obligations contained herein, Owner and Contractor agree as set forth herein.

Article 1 **The Work of the Contract**

- 1.1 Contractor to fully execute the Work. Contractor shall fully execute the entire Work in strict accordance with the Contract Documents, and shall provide all material, equipment, tools, and labor necessary to timely complete the Work described in and reasonably inferable from the Contract Documents, except to the extent specifically indicated to be the responsibility of others.
- 1.2 Contractor to further Owner's interests. Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with Owner to cooperate and collaborate with Owner and others involved with the Project and to exercise Contractor's best skill and judgment; to furnish efficient, professional construction administration, management services and supervision with sufficient quantities of fully qualified, competent and experienced personnel; and to perform the Work in an expeditious and economical manner consistent with Owner's interests. The parties will endeavor to promote harmony, cooperation and mutual respect among the Project participants to the fullest extent possible in order to further the success of the Project and to effect prompt and successful completion of the Project within the requirements of the Contract Documents, the Contract Time and the Contract Sum.

Article 2 **Contract Documents**

- 2.1 The Contract Documents. The "Contract Documents" form the "Contract." The Contract Documents consist of this Agreement (Agreement between Owner and Contractor or the "Agreement"); any attached Exhibits and other documents listed in the Contract Documents; the General Conditions; other documents listed in Article 8 of this Agreement; and written modifications, amendments and Change Orders to the Contract issued after execution of this Agreement.
- 2.2. Contract is complete and integrated agreement. The Contract represents the entire, complete, and integrated agreement between the parties and supersedes prior negotiations, representations or agreements, either written or oral. No oral representations or other agreements have been made by the parties except as specifically established in the Contract.
- 2.3 Contract is between only Owner and Contractor. The Contract Documents shall not be construed to create a contractual relationship of any kind between any Persons other than Owner and Contractor.

Article 3 **Definitions**

- 3.1 Terms, words and phrases to have ordinary meanings. Terms, words and phrases used in the Contract Documents shall have the meanings given them in this Agreement and in the General Conditions or, if not defined, in a manner consistent with construction industry standards. In the event of any inconsistency in such definitions, the definitions in this Agreement shall control.
- 3.2 Construction Documents. The Construction Documents are identified in the General Conditions and other Contract Documents as Drawings and Specifications. The Construction Documents do not include shop drawings or other Submittals.
- 3.3 Contractor. "Contractor" is the Person identified as such in the Agreement and General Conditions. Contractor must be licensed, bonded, and insured as a contractor in the State of Washington, and must legally be permitted to do business. Contractor's authorized representative, including its Designated Representative, shall be authorized to act on Contractor's behalf with respect to the Project.
- 3.4 General Conditions modified. Section 4.03E of the General Conditions is hereby modified to clarify that Contractor and Owner may agree on the number of copies of Submittals to be provided to Owner. If no such agreement is reached, Contractor shall submit five copies.

Article 4 **Notice to Proceed and Substantial Completion**

- 4.1 Notice to Proceed. The date of Notice to Proceed will be specified in a written Notice issued by Owner. Owner may issue separate written authorizations to proceed for different portions of the Work.
- 4.2 Contract Time measured from date of commencement. The Contract Time shall be

measured from the Notice to Proceed date to the contractual date of Substantial Completion established in Section 4.3, subject to adjustments as provided in the Contract Documents. Time is of the essence in completion of the Work.

- 4.3 Substantial Completion and Final Completion. Contractor shall achieve Substantial Completion of the Work by Ninety (90) Days following Notice to Proceed, subject to adjustments as provided in the Contract Documents, and shall achieve Final Completion not later than Sixty (60) Days thereafter. Contractor represents to Owner that the Contract Time is adequate for full performance of the Work. Contractor shall also achieve any interim milestones and phasing requirements set forth in the Contract Documents.
- 4.4 Liquidated damages. Owner will assess, and Contractor will be responsible for, liquidated damages in the amount of Seven hundred fifty-four dollars and nine cents (\$754.09) per Day for each Day beyond the contractual date for Substantial Completion that Substantial Completion is not timely achieved, and subsequently Seven hundred fifty-four dollars and nine cents (\$754.09) per Day for each Day beyond the time period established in Section 4.3 that Final Completion of the entire Work is not achieved. Contractor and Owner agree that the liquidated damages amounts are not penalties and are a reasonable estimation of actual damages to Owner, as of this date of Agreement, based on the inherent uncertainty and difficulty in calculating and quantifying damages caused by delays in the construction of university facilities.

Article 5 **Contract Sum**

- 5.1 Contract Sum. For Contractor's performance of the Contract, Owner shall pay to Contractor the Contract Sum of _____ dollars (\$ _____), subject to additions and deductions for changes in the Work as provided in the Contract Documents. The Contract Sum includes by way of example and not limitation all costs of construction; general conditions; all taxes except Washington State sales tax due on the Contract Sum; Contractor's contingency; any approved Allowances; all insurance; overhead; and Contractor's fee.
- 5.2 Alternates. The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by Owner:

Alternate No.	Description	Price (\$0.00)
1	Install 3" asphalt pavement in lieu of concrete pavement.	

- 5.3 Unit Prices. Any Unit Prices are as follows:

Description	Units	Price (\$0.00)
None		

Unit Prices as set forth in the Contract Documents are "all in." They include all material, equipment, labor, delivery, installation, and Subcontractor costs, any

overhead and profit not included in the fee, and any other costs or expenses in connection with, or incidental to, the performance of that portion of the Work to which such Unit Prices apply.

- 5.4 Allowances. Allowances included in the Contract Sum are as follows:

Allowance	Amount	Included Items
None		

Allowances may be included in the Contract Sum due to uncertainty in scope, price and/or quantity at the time this Agreement is executed. Whenever actual costs are more or less than an allowance, the Contract Sum will be appropriately adjusted. Contractor must provide Owner with written notice of its intent to expend an allowance amount (providing Owner with the opportunity to approve or reject the cost) before expending an allowance amount.

- 5.5 Changes in the Work.

- 5.5.1 Owner may, without invalidating the Contract, order changes in the Work consisting of additions, deletions or other revisions. Owner shall issue such changes in writing.

- 5.5.2 Adjustments of the Contract Sum and/or Contract Time on account of changes in the Work may be determined by any of the methods listed in the General Conditions.

Article 6 **Payments**

- 6.1 Applications for Payment.

- 6.1.1 The Contract Documents detail the requirements for Applications for Payment. Based upon Applications for Payment that Contractor submits to Owner, Owner shall make progress payments to Contractor on account of the Contract Sum.

- 6.2 Progress Payments.

- 6.2.1 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows and in accordance with Section 01 29 00, Applications for Payment:

- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage of completion of each portion of the Work by the share of the Contract Sum allocated to that portion in the Schedule of Values. Pending final determination of the cost to Owner of changes in the Work, amounts not in dispute may be included as provided in the General Conditions unless Owner requires that actual cost records be provided;
- .2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by Owner, suitably stored and insured off the site at a location agreed upon in writing);
- .3 Subtract the aggregate sum of previous payments made by Owner;

- .4 Subtract amounts, if any, for which Owner has withheld payment; and
- .5 Subtract the statutory retainage of five percent (5%) of the above amount as a fund for the protection and payment of the claims of any Person arising out of the Work and the State of Washington with respect to taxes.

6.3 Final Payment.

- 6.3.1 Final payment, constituting the entire unpaid balance of the Contract Sum, less retainage, shall be made by Owner to Contractor no later than 30 Days after Contractor has fully performed the Contract and Final Completion has occurred (except for Contractor's responsibility to correct non-conforming Work discovered after final payment or to satisfy other requirements, if any, that extend beyond final payment), and Contractor has submitted a final Application for Payment.
- 6.3.2 Owner shall release retainage to Contractor in accordance with Chapter 60.28 RCW and the Contract Documents.

Article 7
Miscellaneous Provisions

7.1 Designated Representatives.

- 7.1.1 Owner's Designated Representative, designated below, shall be authorized to act on Owner's behalf with respect to the Project:

<u>Cynthia Arbour</u>	<u>Jason Harper</u>
<u>Project Manager</u>	<u>Construction Manager, Lead</u>
<u>Facilities Services, Capital</u>	<u>Facilities Services, Capital</u>

- 7.1.2 Contractor's Designated Representative, identified below, shall be authorized to act on Contractor's behalf with respect to the Project:

- 7.1.3 Neither Owner's nor Contractor's Designated Representatives shall be changed without 10 Days' written notice to the other party.

- 7.2 Interest. Payments due and unpaid under the Contract Documents shall bear interest as specified by RCW 39.76, not to exceed the Bank of America prime plus two percent (2%) per annum.

- 7.3 Quality control and assurance and Owner's right to inspect the Work: Contractor shall develop and submit an overall Quality Control and Assurance Plan to ensure that the Work is inspected by qualified members of Contractor's staff or third parties. The Quality Control and Assurance Plan must be acceptable to Owner. Owner expressly reserves the right to inspect any and all portions of the Work at any time during the Project. Contractor shall provide access to the Work as needed by Owner or its representatives, including the use of scaffolding, platforms, or lifts. All

corrections or observations noted by Owner shall be logged by Contractor for correction, tracking and documentation to the satisfaction of Owner.

- 7.4 Contractor to actively manage and supervise Work. Contractor shall review and inspect the Work of Subcontractors on a regular basis for defects and deficiencies in their Work and for conformance with the Construction Documents and other Contract Documents, and shall stop the Work of Subcontractors, if necessary. Contractor shall provide notification at regularly scheduled progress meetings of any major defects or deficiencies and recommend remedial action.
- 7.5 Use of Third Party Neutral. Owner and Contractor intend to utilize a Third Party Neutral to assist in addressing and resolving disputes that may arise during the Project. The Third Party Neutral will be jointly engaged and will have the roles and responsibilities set forth in a Third Party Neutral Agreement, which shall be established in accordance with Section 00 80 10, Third Party Neutral.

Article 8
Enumeration of the Contract Documents

- 8.1 The Contract Documents. The Contract Documents, except for modifications issued after execution of this Agreement, are enumerated as follows:
- 8.1.1 This executed Agreement, any attached Exhibits and other documents listed in this Agreement.
- 8.1.2 The General Conditions for Washington State Facility Construction with Washington State University Amendments, and any Supplementary Conditions of the Contract.
- 8.1.3 The Addenda, if any, are as follows:

Number	Date	Pages
--------	------	-------

- 8.1.4 Other documents, if any, forming part of the Contract Documents are as follows:
- See Contract Documents.
Department of Labor and Industries Prevailing Wage Rates.

OWNER:
WASHINGTON STATE UNIVERSITY

CONTRACTOR:
FIRM NAME
WA CONTRACTOR LICENSE NUMBER

(Signature) (Date)

(Printed Name)
Vice President and Chief Financial Officer
Finance and Administration

(Signature) (Date)

(Printed Name)
(Title)

END OF SECTION 00 50 00

<u>Section</u>	<u>Description</u>	
PART 1 -	GENERAL PROVISIONS	3
1.01	DEFINITIONS	3
1.02	ORDER OF PRECEDENCE	5
1.03	EXECUTION AND INTENT	6
PART 2 -	INSURANCE AND BONDS	6
2.01	CONTRACTOR'S LIABILITY INSURANCE	6
2.02	COVERAGE LIMITS	8
2.03	INSURANCE COVERAGE CERTIFICATES	8
2.04	PAYMENT AND PERFORMANCE BONDS	8
2.05	ALTERNATIVE SURETY	8
2.06	BUILDER'S RISK	9
PART 3 -	TIME AND SCHEDULE	9
3.01	PROGRESS AND COMPLETION	9
3.02	CONSTRUCTION SCHEDULE	9
3.03	OWNER'S RIGHT TO SUSPEND THE WORK FOR CONVENIENCE	10
3.04	OWNER'S RIGHT TO STOP AND/OR CARRY OUT THE WORK FOR CAUSE	11
3.05	DELAY	11
3.06	NOTICE TO OWNER OF LABOR DISPUTES	13
3.07	DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION	13
PART 4 -	SPECIFICATIONS, DRAWINGS, AND OTHER DOCUMENTS	13
4.01	DISCREPANCIES AND CONTRACT DOCUMENT REVIEW	13
4.02	PROJECT RECORD	14
4.03	SUBMITTALS	15
4.04	ORGANIZATION OF SPECIFICATIONS	16
4.05	OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS	16
PART 5 -	PERFORMANCE	17
5.01	CONTRACTOR CONTROL AND SUPERVISION	17
5.02	PERMITS, FEES, AND NOTICES	17
5.03	PATENTS AND ROYALTIES	18
5.04	PREVAILING WAGES	18
5.05	HOURS OF LABOR	19
5.06	NONDISCRIMINATION	19
5.07	SAFETY PRECAUTIONS	20
5.08	OPERATIONS, MATERIAL HANDLING, AND STORAGE AREAS	22
5.09	PRIOR NOTICE OF EXCAVATION	22
5.10	UNFORESEEN PHYSICAL CONDITIONS	22
5.11	PROTECTION OF EXISTING STRUCTURES, EQUIPMENT, VEGETATION, UTILITIES AND IMPROVEMENTS	23
5.12	LAYOUT OF WORK	23
5.13	MATERIAL AND EQUIPMENT	24
5.14	AVAILABILITY AND USE OF UTILITY SERVICES	24
5.15	TESTS AND INSPECTION	24
5.16	CORRECTION OF NONCONFORMING WORK	25
5.17	CLEAN UP	26
5.18	ACCESS TO WORK	27
5.19	OTHER CONTRACTS	27

<u>Section</u>	<u>Description</u>	
5.20	SUBCONTRACTORS AND SUPPLIERS	27
5.21	WARRANTY OF CONSTRUCTION	29
5.22	INDEMNIFICATION.....	29
PART 6 -	PAYMENTS AND COMPLETION	30
6.01	CONTRACT SUM.....	30
6.02	SCHEDULE OF VALUES.....	30
6.03	APPLICATION FOR PAYMENT.....	30
6.04	PROGRESS PAYMENTS	31
6.05	PAYMENTS WITHHELD	32
6.06	RETAINAGE, BOND CLAIM RIGHTS, AND LIENS.....	33
6.07	SUBSTANTIAL COMPLETION	33
6.08	PRIOR OCCUPANCY	34
6.09	FINAL COMPLETION, ACCEPTANCE, AND PAYMENT.....	35
PART 7 -	CHANGES	36
7.01	CHANGE IN THE WORK	36
7.02	CHANGE IN THE CONTRACT SUM	37
7.03	CHANGE IN THE CONTRACT TIME.....	40
PART 8 -	CLAIMS AND DISPUTE RESOLUTION	41
8.01	CLAIMS	41
8.02	INFORMAL RESOLUTION OF DISPUTES	42
8.03	FORMAL RESOLUTION OF CLAIMS.....	43
8.04	CLAIMS PROCESS.....	44
PART 9 -	TERMINATION OF THE WORK	48
9.01	TERMINATION BY OWNER FOR CAUSE	48
9.02	TERMINATION BY OWNER FOR CONVENIENCE	49
9.03	TERMINATION BY CONTRACTOR FOR CAUSE	50
PART 10 -	MISCELLANEOUS PROVISIONS	50
10.01	GOVERNING LAW	50
10.02	SUCCESSORS AND ASSIGNS.....	50
10.03	MEANING OF WORDS	51
10.04	RIGHTS AND REMEDIES.....	51
10.05	CONTRACTOR REGISTRATION AND COMPLIANCE	51
10.06	TIME COMPUTATIONS	52
10.07	RECORDS RETENTION.....	52
10.08	THIRD-PARTY AGREEMENTS	52
10.09	ANTITRUST ASSIGNMENT.....	52
10.10	HEADINGS AND CAPTIONS.....	52
10.11	INDEPENDENT CONTRACTOR	52
10.12	OWNER'S ROLE.....	52

WSU amendments to the Washington State Facility Construction
General Conditions are identified by a bar on the right hand side of modified paragraphs

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

PART 1 - GENERAL PROVISIONS

1.01 DEFINITIONS

- A. "Application for Payment" means a written request submitted by Contractor to Owner for payment of Work completed in accordance with the Contract Documents and approved Schedule of Values, supported by such substantiating data as Owner may require.
- B. "Architect," "Engineer," or "A/E" means a person or entity lawfully entitled to practice architecture or engineering, representing Owner within the limits of its delegated authority.
- C. An "Allowance" is an amount included in the Contract Sum for a stated part of the Work that is not fully defined and/or quantified at the time the Contract Sum is established. When that part of the Work is adequately defined and/or quantified, the Contract Sum will be adjusted to account for the difference between the Allowance and the actual cost of the item. Following the adjustment, that part of the Work will no longer be an Allowance item. Although not capitalized in Section 5.02B, "allowance" shall mean "Allowance."
- D. "Change Order" means a written instrument signed by Owner and Contractor stating their agreement upon all of the following: (1) a change in the Work; (2) the amount of the adjustment in the Contract Sum, if any, and (3) the extent of the adjustment in the Contract Time, if any.
- E. "Claim" means Contractor's exclusive remedy for resolving disputes with Owner arising out of or relating to the Contract Documents or the breach thereof or requesting an adjustment in the Contract Sum or Contract Time, as more fully set forth in Part 8. As used in the Contract Documents, the exclusive meaning of "equitable adjustment" is the ability of Contractor to follow the contractual dispute resolution process in Part 8, including the requirement for submitting a timely Notice, substantiation, and Claim.
- F. The "Contract" is the agreement between Owner and Contractor and is formed by the Contract Documents. The Contract represents the entire and integrated agreement between Owner and Contractor and supersedes prior negotiations, representations or agreements, either written or oral.
- G. "Contract Award Amount" is the sum of the Base Bid and any accepted Alternates, if any, for Design-Bid-Build projects and is the accepted initial Guaranteed Maximum Price for Design-Build and GC/CM projects.
- H. "Contract Documents" means the General Conditions, modifications to the General Conditions, Supplemental Conditions, Agreement, Drawings and Specifications, and all addenda and modifications thereof.
- I. "Contract Sum" is the total amount payable by Owner to Contractor for performance of the Work in accordance with the Contract Documents, including all taxes imposed by law and properly chargeable to the Work, except Washington State sales tax.
- J. "Contract Time" is the number of Days or other time period allotted in the Contract Documents from the Notice to Proceed for achieving Substantial Completion of the Work.
- K. "Contractor" means the person or entity who has agreed with Owner to perform the Work in accordance with the Contract Documents.
- L. "Day(s)" means calendar day(s) unless otherwise specified.

**FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

- M. "Drawings" are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, and may include plans, elevations, sections, details, schedules, and diagrams.
- N. "Final Acceptance" means the written acceptance of the Work by Owner, as more fully set forth in Section 6.08B.
- O. "Final Completion" means that the Work is fully and finally complete in accordance with the Contract Documents and Contractor has submitted its final Application for Payment, as more fully set forth in Section 6.09A.
- P. "Force Majeure" means those acts entitling Contractor to request an equitable adjustment in the Contract Time, as more fully set forth in paragraph 3.05A.
- Q. "Notice" means a written notice which has been delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended or, if delivered or sent by registered or certified mail, to the last business address known to the party giving notice. Although not capitalized in the following provisions, "notice" shall mean "Notice" in Sections 3.03B, 3.03C, 3.06A, 5.01D, 5.02C, 5.03, 5.09A, 5.10A, 5.15A, 5.16F, 5.17, 9.01A, 9.02A, and 9.02B.
- R. "Notice to Proceed" means a written Notice from Owner to Contractor that permits pre-construction and construction activities to commence upon specified terms and defines the date on which the Contract Time begins to run.
- S. "Owner" means the Washington State University Board of Regents, which has the authority to enter into, administer, and/or terminate the Work in accordance with the Contract Documents. Owner shall designate in writing a Representative who shall have authority to bind Owner with respect to all matters requiring Owner's approval or authorization. A/E does not have such authority.
- T. "Person" means a corporation, partnership, business association of any kind, trust, company, or individual.
- U. "Prior Occupancy" means Owner's use of all or parts of the Project before Substantial Completion, as more fully set forth in Section 6.08A.
- V. "Progress Schedule" means a schedule of the Work, in a form satisfactory to Owner, as further set forth in Section 3.02.
- W. "Project" means the total construction of which the Work performed in accordance with the Contract Documents may be the whole or a part and which may include construction by Owner or by separate contractors.
- X. "Project Record" means the separate set of Drawings and Specifications as further set forth in paragraph 4.02A.
- Y. "Schedule of Values" means a written breakdown allocating the total Contract Sum to each principal category of Work, in such detail and format as requested by Owner.
- Z. "Specifications" are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

- AA. "Subcontract" means a contract between Contractor and a Subcontractor for the purpose of obtaining supplies, materials, equipment, work or services of any kind for or in connection with the Work. Although not capitalized in the following provisions, "subcontract" shall mean "Subcontract" in Sections 5.10A, 5.20E, 9.01B, and 9.02B.
- BB. "Subcontractor" means any Person of any tier, other than Contractor, who agrees to furnish or furnishes by contract with, or through Contractor, any supplies, materials, equipment, or services of any kind in connection with the Work. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor. Although not capitalized in the following provisions, "subcontractor" shall mean "Subcontractor" in Sections 5.04B, 5.04C, 5.04G, 5.20A, and 5.21B.
- CC. "Substantial Completion" means that stage in the progress of the Work (or portion of the Work designated and approved by Owner) when the construction is sufficiently complete, in accordance with the Contract Documents, so that Owner can fully occupy or utilize the Work (or portion designated by Owner) for its intended use, as more fully set forth in Section 6.07. There may be separate dates of Substantial Completion specified in the Contract Documents for various phases or portions of the Work.
- DD. "Work" means the construction and services required by the Contract Documents, and includes, but is not limited to, labor, materials, supplies, equipment, services, permits, and the manufacture and fabrication of components, performed, furnished, or provided in accordance with the Contract Documents. Although not capitalized in the following provisions, "work" shall mean "Work" in Sections 3.02D, 5.04B, 5.04C, 5.07D, 5.12A, 6.02 and 7.02A.
- EE. A "Work Directive" ("WD") is a binding written order prepared by Owner that directs Work prior to total agreement on adjustment, if any, in the Contract Sum or Contract Time, or both.
- FF. "Work Site" means the space identified and circumscribed on construction documents. The work site is controlled by the Contractor and the Contractor is responsible for compliance to regulatory requirements within the circumscribed area. Changes to the work site shall be submitted by Contractor and approved by Owner.

1.02 ORDER OF PRECEDENCE

Any conflict or inconsistency in the Contract Documents shall be resolved by giving the documents precedence in the following order, with a revision to a Contract Document having precedence over the original document and a later document having precedence over an earlier document:

1. Signed Agreement, with any Change Orders having precedence.
2. Supplemental Conditions.
3. Modifications to the General Conditions.
4. General Conditions.
5. Specifications and Drawings. The Specifications and Drawings are complementary and shall have equal precedence. Thus, anything mentioned in the Specifications but not shown on the Drawings, or shown on the Drawings but not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both. If there is any inconsistency between the Specifications and Drawings, Contractor will make an inquiry to Owner to determine how to proceed. Unless otherwise directed, Contractor will provide the better quality or greater quantity of any Work or materials, as reasonably interpreted by Owner, at no change in the Contract Sum or Contract

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

Time. In case of conflict within the Specifications, provisions in Division 1 shall take precedence over provisions of any other Division. In case of conflict within the Drawings, large scale Drawings shall take precedence over small scale Drawings.

1.03 EXECUTION AND INTENT

Contractor Representations: Contractor makes the following representations to Owner:

1. Contract Sum and Contract Time reasonable: The Contract Sum is reasonable compensation for the Work and the Contract Time is adequate for the performance of the Work, as represented by the Contract Documents;
2. Contractor familiar with project: Contractor has carefully reviewed the Contract Documents, visited and examined the Project site, become familiar with the local conditions in which the Work is to be performed, and satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and subsurface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof;
3. Contractor financially capable: Contractor is financially solvent, able to pay its debts as they mature, and possesses sufficient working capital to complete the Work and perform Contractor's obligations required by the Contract Documents; and
4. Contractor can complete Work: Contractor is able to furnish the plant, tools, materials, supplies, equipment and labor required to complete the Work and perform the obligations required by the Contract Documents and has sufficient experience and competence to do so.

PART 2 - INSURANCE AND BONDS

2.01 CONTRACTOR'S LIABILITY INSURANCE

General insurance requirements: Prior to commencement of the Work, Contractor shall obtain all the insurance required by the Contract Documents and provide evidence satisfactory to Owner that such insurance has been procured, including but not limited to (1) Certificates of Insurance on ACORD Form 25, and/or ACORD Form 27 or their equivalents, and which shall list any applicable self-insured retentions, (2) the actual costs (expressed as a percentage) of Contractor's liability insurance under Section 2.01A.1 below, (3) applicable endorsements evidencing proof of compliance with the requirements listed below, (4) evidence of State Workers' Compensation coverage, and (5) a copy of any builder's risk policy required by the Contract Documents. All policies, endorsements and certificates must be signed copies and shall contain a provision that policies will not be cancelled without first giving thirty (30) days (or in the event of non-payment of premium, ten (10) days) prior written Notice to Owner. Contractor shall furnish to Owner copies of any subsequently issued endorsements amending, modifying, altering or restricting coverage terms or limits. Review of Contractor's insurance by Owner shall not relieve or decrease the liability of Contractor. Companies writing the insurance to be obtained by Part 2 shall be licensed to do business under Chapter 48 RCW or comply with the Surplus Lines Law of the State of Washington. Contractor shall include in the Contract Sum the cost of all insurance and bond costs required for the Work. Insurance carriers providing insurance shall be acceptable to Owner, and its A. M. Best rating shall be indicated on the insurance certificates.

- A. Term of insurance coverage: Contractor shall maintain the following insurance coverage during the Work and for one year after Substantial Completion. Contractor shall also maintain the following insurance coverage during the performance of any corrective Work required by Section 5.16.

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

1. General Liability Insurance: Commercial General Liability (CGL) on an occurrence-based ISO Form CG 00 01 or broader, including products and completed operations, personal and advertising injury, bodily injury and property damage liability arising from Contractor's operations or Work, including operations or Work Contractor may subcontract or sublet to others.

The policy shall be purchased from a company or companies lawfully authorized to do business in the State of Washington possessing an A.M. Best's policyholder's rating of A or better and a financial rating of no less than XI.

Contractor's policy shall be designated primary and non-contributory to Owner's policies, and shall include a waiver of subrogation against Owner. Any self-insured retentions or deductibles must be disclosed and approved by Owner, and Contractor agrees to be responsible for payment of any and all self-insured retentions or deductibles.
 2. Automobile Liability Insurance: Automobile liability on ISO Form CA 00 01 covering Code 1 (any auto).
 3. Stop Gap Liability Insurance for damages because of bodily injuries to Contractor's employees.
- B. Industrial Insurance compliance: Contractor shall comply with the Washington State Industrial Insurance Act and, if applicable, the Federal Longshoremen's and Harbor Workers' Act and the Jones Act.
- C. Insurance to protect for the following: All insurance coverages shall protect against claims for damages for personal and bodily injury or death, as well as claims for property damage, which may arise from operations in connection with the Work whether such operations are by Contractor or any Subcontractor.
- D. Owner as Additional Insured: All insurance coverages shall be endorsed to include Owner, its officers, and employees, and any required governmental agencies as additional named insureds with coverage at least as broad as ISO Forms CG 20 10, CG 20 37, and CA 20 48, with no self-insured retentions applicable to the additional insureds.
- E. Subcontractor Coverage: Contractor shall ensure and require that Subcontractors have insurance coverage to cover bodily injury and property damage on all operations and all vehicles owned or operated by Subcontractors. Subcontractors shall name Contractor and Owner, any required governmental agencies, and others designated in the Contract Documents as well as their officers and employees, as additional insureds and give at least thirty (30) Days' Notice of cancellation.

2.02 COVERAGE LIMITS

Insurance amounts: The coverage limits shall be not less than the amounts specified in the Agreement; if limits are not specified in the Agreement, coverage limits shall be not less than as follows:

- A. \$1,000,000 per occurrence for bodily injury, property damage, personal and advertising injury.
- B. \$2,000,000 general aggregate to apply separately to each project or location.
- C. \$2,000,000 annual aggregate for products and completed operations.
- D. \$1,000,000 combined single limit each automobile accident or loss.

- E. \$1,000,000 per accident for bodily injury or occupational disease of Contractor's employees

Coverages and Minimums: Owner's review, specification or approval of the insurance in this Contract or of its coverage or amount shall not relieve or decrease the liability of Contractor under the Contract Documents or otherwise. Coverages are the minimum to be provided and are not limitations of liability under the Contract, indemnification, or applicable law provisions. Contractor may, at its expense, purchase larger coverage amounts.

2.03 PROOF OF INSURANCE COVERAGE

- A. Certificate & endorsements required: Prior to commencement of the Work, Contractor shall furnish to Owner completed certificates of insurance coverage and endorsements evidencing compliance with the additional insured, cancellation, and waiver of subrogation requirements..
- B. List Project info: All insurance certificates shall name Owner's Project number and Project title.
- C. Policy: In the event of a claim or loss, Contractor shall promptly provide Owner with a complete copy of all applicable policies.

2.04 PAYMENT AND PERFORMANCE BONDS

Conditions for bonds: Payment and performance bonds for 100% of the Contract Award Amount, plus Washington State sales tax, shall be furnished for the Work, using the current version of the Payment Bond and Performance Bond form published by and available from the American Institute of Architects (AIA) – form A312. No payment or performance bond is required if the Contract Sum is \$150,000 or less and Contractor requests and the Owner agrees that Owner may, in lieu of the bond, retain 10% of the Contract Sum for the period specified in RCW 39.08.010.

2.05 ALTERNATIVE SURETY

When alternative surety required: Contractor shall promptly furnish payment and performance bonds from an alternative surety if:

- A. Owner has a reasonable objection to the surety; or
- B. Any surety fails to furnish reports on its financial condition if required by Owner.

2.06 BUILDER'S RISK

- A. Owner to buy builder's risk insurance: Owner shall purchase and maintain builder's risk insurance in the amount of the Contract Sum, including all Change Orders, for the Work on a replacement cost basis until Substantial Completion. For projects not involving new building construction, an "Installation Floater" is an acceptable substitute for the builder's risk insurance. The insurance shall cover the interests of Owner, Contractor, and any Subcontractors, as their interests may appear.
- B. Losses covered: Builder's risk insurance shall be placed on an "all risk" basis or equivalent policy form and insure against the perils of fire and extended coverage and physical loss or damage including theft, vandalism, malicious mischief, collapse, false work, flood, wind, temporary buildings, earthquake, debris removal including demolition, and shall cover reasonable compensation for A/E's services and expenses required as a result of an insured loss. Losses up to the deductible amount shall be the responsibility of Contractor.

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

- C. Waiver of subrogation rights: Owner and Contractor waive all subrogation rights against each other, any Subcontractors, A/E, A/E's subconsultants, separate contractors described in Section 5.19, if any, and any of their subcontractors, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this Section 2.06 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by Owner as fiduciary. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective to a Person or entity even though that Person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the Person or entity had an insurable interest in the property damaged.

PART 3 - TIME AND SCHEDULE

3.01 PROGRESS AND COMPLETION

Contractor to meet schedule: Contractor shall diligently prosecute the Work, with adequate forces, achieve Substantial Completion within the Contract Time, and achieve Final Completion within the time period specified in the Contract Documents. If Contractor fails to perform in a timely manner in accordance with the Contract Documents and, through the fault of Contractor or Subcontractor(s), fails to meet the Progress Schedule, Contractor shall be in default and shall take such steps as may be necessary to immediately improve its progress without change in the Contract Sum or Contract Time.

3.02 CONSTRUCTION SCHEDULE

- A. Preliminary Progress Schedule: Unless otherwise provided in Division 1, Contractor shall, within 14 Days after issuance of the Notice to Proceed, submit a preliminary Progress Schedule consistent with the requirements of the Contract Documents. The Progress Schedule shall not exceed time limits specified by the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work, and shall show the sequence in which Contractor proposes to perform the Work, and the dates on which Contractor plans to start and finish major portions of the Work, including dates for submission of Submittals per Section 4.03, which shall be coordinated with the Progress Schedule and identify dates for Owner review, and for acquiring materials and equipment.
- B. Form of Progress Schedule: Unless otherwise provided in Division 1, the Progress Schedule shall be in the form of a bar chart, or a critical path method analysis, as specified by Owner. The preliminary Progress Schedule may be general, showing the major portions of the Work, with a more detailed Progress Schedule submitted as directed by Owner.
- C. Owner comments on Progress Schedule: Owner shall return comments on the preliminary Progress Schedule to Contractor within 14 Days of receipt. Review by Owner of Contractor's schedule does not constitute an approval or acceptance of Contractor's construction means, methods, logic or sequencing, or its ability to complete the Work within the Contract Time. Contractor shall revise and resubmit its schedule, as necessary. Owner may withhold a portion of progress payments until a Progress Schedule has been submitted that meets the requirements of this Section 3.02.
- D. Monthly updates and compliance with Progress Schedule: Contractor shall utilize and comply with the Progress Schedule. On a monthly basis, or as otherwise directed by Owner, Contractor shall submit an updated Progress Schedule at its own expense to Owner indicating actual progress. If, in the opinion of Owner, Contractor is not in conformance with the Progress Schedule for reasons other than acts of Force Majeure as identified in Section 3.05, Contractor shall take such steps as are necessary to bring the actual completion dates of its work activities into conformance with the Progress Schedule, and if directed by Owner, Contractor shall submit a

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

corrective action plan or revise the Progress Schedule to reconcile with the actual progress of the Work.

- E. Contractor to notify Owner of delays: Contractor shall perform the Work in accordance with the most recent Progress Schedule submitted to Owner. Contractor shall promptly notify Owner in writing of any actual or anticipated event that is delaying or could delay achievement of any milestone or performance of any critical path activity of the Work. Contractor shall indicate the expected duration of the delay, the anticipated effect of the delay on the Progress Schedule, and the action being or to be taken to correct the problem. Provision of such Notice does not relieve Contractor of its obligation to complete the Work within the Contract Time.

3.03 OWNER'S RIGHT TO SUSPEND THE WORK FOR CONVENIENCE

- A. Owner may suspend Work: Owner may, at its sole discretion, order Contractor, in writing, to suspend all or any part of the Work for up to 90 Days, or for such longer period as mutually agreed.
- B. Compliance with suspension; Owner's options: Upon receipt of a written notice suspending the Work, Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of cost of performance directly attributable to such suspension. Within a period up to 90 Days after the notice is delivered to Contractor, or within any extension of that period to which the parties shall have agreed, Owner shall either:
1. Cancel the written notice suspending the Work; or
 2. Terminate the Work covered by the notice as provided in the termination provisions of Part 9.
- C. Resumption of Work: If a written notice suspending the Work is cancelled or the period of the notice or any extension thereof expires, Contractor shall resume Work.
- D. Equitable Adjustment for suspensions: Contractor shall be entitled to an equitable adjustment in the Contract Time, or Contract Sum, or both, for increases in the time or cost of performance directly attributable to such suspension, provided Contractor complies with all requirements set forth in Part 7.

3.04 OWNER'S RIGHT TO STOP AND/OR CARRY OUT THE WORK FOR CAUSE

- A. Owner may stop Work for Contractor's failure to perform: If Contractor fails or refuses to perform its obligations in accordance with the Contract Documents, Owner may order Contractor, in writing, to stop the Work, or any portion thereof, until Owner has accepted satisfactory corrective action.
- B. Owner may carry out the Work after Contractor's failure to perform: If Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a 14-Day period after receipt of written Notice from Owner to commence and continue to make reasonable progress toward the correction of such default or neglect with diligence and promptness, Owner may, without prejudice to other remedies Owner may have, correct such deficiencies, and an appropriate Change Order shall be issued deducting from payments then or thereafter due Contractor the reasonable cost of correcting the deficiencies, including Owner's expenses and compensation for A/E's additional services made necessary by the default, neglect or failure. If payments then or thereafter due Contractor are not sufficient to cover such amounts, Contractor shall pay the difference to Owner.

**FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

- C. No equitable adjustment for Contractor's failure to perform: Contractor shall not be entitled to an equitable adjustment in the Contract Time or Contract Sum for any increased cost or time of performance attributable to Contractor's failure or refusal to perform or from any reasonable remedial action taken by Owner based upon such failure.

3.05 DELAY

- A. Force Majeure actions not a default; Force Majeure defined: Any delay in or failure of performance by Owner or Contractor shall not constitute a default if and to the extent the cause for such delay or failure of performance was unforeseeable and beyond the control of the party. Acts of Force Majeure include, but are not limited to:

1. Acts of God or the public enemy;
2. Acts or omissions of any government entity not the fault of Owner or Contractor;
3. Fire or other casualty for which Contractor is not responsible;
4. Quarantine or epidemic;
5. Industry-wide strike or defensive lockout;
6. Unusually severe weather conditions which could not have been reasonably anticipated; and
7. Unusual delay in receipt of supplies or products which were ordered and expedited and for which no substitute reasonably acceptable to Owner was available.
 - a. "Unusually severe weather" shall mean weather conditions that are abnormal for the period of time for which Force Majeure is claimed, that could not reasonably have been anticipated or avoided, and that had an adverse effect on the Progress Schedule. Neither the Contract Time nor the Contract Sum will be adjusted for normal inclement weather or if the Work was behind schedule (unless behind schedule for a reason not the responsibility of the Contractor) at the time the unusually severe weather occurred. The Contractor shall be entitled to a change in the Contract Time only (but not a change in the Contract Sum) if the Contractor can substantiate to the reasonable satisfaction of the Owner that there was unusually severe weather as compared to normal using a ten (10) year average of accumulated record mean values from climatological data compiled by the U.S. Department of Commerce National Oceanic and Atmospheric Administration for the locale closest to the Project, and that the abnormal inclement weather actually impacted and extended the critical path of the Work. Unusual is defined as a 10-year weather event of either or both precipitation or temperature extremes that fall outside the upper and lower ranges within a 10-year periodicity

- B. Contract Time adjustment for Force Majeure: Contractor shall be entitled to an equitable adjustment in the Contract Time for changes in the time of performance directly attributable to an act of Force Majeure, provided it makes a request for equitable adjustment. Contractor shall not be entitled to an adjustment in the Contract Sum resulting from an act of Force Majeure.

- C. Contract Time or Contract Sum adjustment if Owner at fault: Contractor shall be entitled to an equitable adjustment in Contract Time, and may be entitled to an equitable adjustment in

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

Contract Sum, if the cost or time of Contractor's performance is changed due to the fault or negligence of Owner, provided the Contractor makes a request for equitable adjustment.

- D. No Contract Time or Contract Sum adjustment if Contractor at fault: Contractor shall not be entitled to an adjustment in Contract Time or in the Contract Sum for any delay or failure of performance to the extent such delay or failure was caused by Contractor or anyone for whose acts Contractor is responsible.
- E. Contract Time adjustment only for concurrent fault: To the extent any delay or failure of performance was concurrently caused by the Owner and Contractor, Contractor shall be entitled to an adjustment in the Contract Time for that portion of the delay or failure of performance that was concurrently caused, provided it makes a request for equitable adjustment, but shall not be entitled to an adjustment in Contract Sum.
- F. Contractor to mitigate delay impacts: Contractor shall make all reasonable efforts to prevent and mitigate the effects of any delay, whether occasioned by an act of Force Majeure or otherwise. Contractor shall not recover damages, an equitable adjustment or an increase in the Contract Sum or Contract Time from Owner where Contractor could have reasonably avoided the delay by the exercise of due diligence.
- G. Types of damages permitted: If Contractor and its Subcontractors are entitled to a change in the Contract Sum, the amount of the change shall be the actual costs incurred by the Contractor and Subcontractors directly related to the change calculated in accordance with Section 7.02. Contractor and its Subcontractors shall not otherwise (not reflected by the actual costs incurred as calculated in accordance with Section 7.02) be entitled to damages arising out of actual or alleged loss of efficiency; morale, fatigue, attitude, or labor rhythm; constructive acceleration; home office overhead; expectant underrun; trade stacking; reassignment of workers; rescheduling of Work, concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended overhead; profit upon damages for delay; impact damages including cumulative impacts; or similar damages. Any effect that such alleged events may have on Contractor or its Subcontractors, to the extent not otherwise paid, is subsumed in and fully compensated through the percentage Fee on Change Orders paid through Section 7.02A.3.e and any liquidated damages paid hereunder.

3.06 NOTICE TO OWNER OF LABOR DISPUTES

- A. Contractor to notify Owner of labor disputes: If Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay timely performance in accordance with the Contract Documents, Contractor shall immediately give notice, including all relevant information, to Owner.
- B. Pass through notification provisions to Subcontractors: Contractor agrees to insert a provision in its Subcontracts and to require insertion in all sub-subcontracts, that in the event timely performance of any such contract is delayed or threatened by delay by any actual or potential labor dispute, the Subcontractor or Sub-subcontractor shall immediately notify the next higher tier Subcontractor or Contractor, as the case may be, of all relevant information concerning the dispute.

3.07 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION

- A. Liquidated Damages:
 - 1. Reason for Liquidated Damages: Timely performance and completion of the Work is essential to Owner and time limits stated in the Contract Documents are of the essence.

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

Owner will incur serious and substantial damages if Substantial Completion of the Work does not occur within the Contract Time. However, it would be difficult if not impossible to determine the exact amount of such damages. Consequently, provisions for liquidated damages are included in the Contract Documents.

2. Calculation of Liquidated Damages amount: The liquidated damage amounts set forth in the Contract Documents will be assessed not as a penalty, but as liquidated damages for breach of the Contract Documents. This amount is fixed and agreed upon by and between the Contractor and Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain. This amount shall be construed as the actual amount of damages sustained by the Owner, and may be retained by the Owner and deducted from periodic payments to the Contractor.
 3. Contractor responsible even if Liquidated Damages assessed: Assessment of liquidated damages shall not release Contractor from any obligations or liabilities pursuant to the Contract Documents. If Contractor substantially fails to perform in a timely manner in accordance with the Contract Documents and, through the fault of Contractor or Subcontractor(s), fails to achieve Substantial Completion within the Contract Time, Contractor shall be in default.
- B. Actual Damages: If no liquidated damages are established, actual damages may be assessed for failure to achieve both Substantial Completion and Final Completion within the time provided. Actual damages will be calculated on the basis of direct architectural, administrative, and other related costs attributable to the Project from the date when Substantial and/or Final Completion should have been achieved, as applicable. Owner may offset these costs against any payment due Contractor.

PART 4 - SPECIFICATIONS, DRAWINGS, AND OTHER DOCUMENTS

4.01 DISCREPANCIES AND CONTRACT DOCUMENT REVIEW

- A. Specifications and Drawings are basis of the Work: The intent of the Specifications and Drawings is to describe a complete Project to be constructed in accordance with the Contract Documents. Contractor shall furnish all labor, materials, equipment, tools, transportation, permits, and supplies, and perform the Work required in accordance with the Drawings, Specifications, and other provisions of the Contract Documents.
- B. Parts of the Contract Documents are complementary: The Contract Documents are complementary. What is required by one part of the Contract Documents shall be binding as if required by all. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.
- C. Contractor to report discrepancies in Contract Documents: Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Owner. If, during the performance of the Work, Contractor finds a conflict, error, inconsistency, or omission in the Contract Documents, it shall promptly and before proceeding with the Work affected thereby, report such conflict, error, inconsistency, or omission to A/E in writing.
- D. Contractor knowledge of discrepancy in documents – responsibility: Contractor shall do no Work without applicable Drawings, Specifications, and, where required, accepted shop drawings and other Submittals, unless instructed to do so in writing by Owner. If Contractor performs any construction activity, and it knows or reasonably should have known that any of the Contract

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

Documents contain a conflict, error, inconsistency, or omission, Contractor shall be responsible for the performance and shall bear the cost for its correction.

- E. Contractor to perform Work implied by Contract Documents: Contractor shall provide any work or materials the provision of which is clearly implied and is within the scope of the Contract Documents even if the Contract Documents do not mention them specifically.
- F. Interpretation questions referred to A/E: Questions regarding interpretation of the requirements of the Contract Documents shall be referred to the A/E.

4.02 PROJECT RECORD

- A. Contractor to maintain Project Record Drawings and Specifications: Contractor shall legibly mark in ink on a separate set of the Drawings and Specifications all actual construction, including depths of foundations, horizontal and vertical locations of internal and underground utilities and appurtenances referenced to permanent visible and accessible surface improvements, field changes of dimensions and details, actual suppliers, manufacturers and trade names, models of installed equipment, changes made to the building enclosure, and Change Order Proposals. This separate set of Drawings and Specifications shall be the "Project Record." The Project Record shall include all Architectural, Mechanical, Electrical, Structural and Civil as-built drawings, whether or not any changes occur and shall also include Addenda, Change Orders, WDs and other modifications to the Contract, in good order and marked currently to indicate field changes and selections made during construction, as well as one copy of accepted shop drawings, product data, samples and other required Submittals.
- B. Update Project Record weekly and keep on site: The Project Record shall be maintained on the Project site throughout the construction and shall be clearly labeled "PROJECT RECORD." The Project Record shall be available to A/E and Owner at all times. The Project Record shall be updated at least weekly noting all changes and shall be available to Owner at all times.
- C. Final Project Record to A/E before Final Acceptance: Contractor shall submit the completed and finalized Project Record to A/E prior to Final Acceptance.

4.03 SUBMITTALS

- A. Definition of Submittals: "Submittals" means documents and other information required to be submitted to A/E by Contractor pursuant to the Contract Documents, showing in detail: the proposed fabrication and assembly of structural elements; and the installation (i.e. form, fit, and attachment details) of materials and equipment. Submittals can include, but are not limited to, drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, samples, and similar materials furnished by Contractor to explain in detail specific portions of the Work required by the Contract Documents. For materials and equipment to be incorporated into the Work, Contractor submittal shall include the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the item. When directed, Contractor shall submit all samples at its own expense. Owner may duplicate, use, and disclose Submittals provided in accordance with the Contract Documents.
- B. Approval of Submittals by Contractor and A/E: Contractor shall coordinate all Submittals with the Progress Schedule per Section 3.02A, shall review them for accuracy, completeness, and compliance with the Contract Documents, and shall indicate its approval thereon as evidence of such coordination and review. Where required by law, Submittals shall be stamped by an appropriate professional licensed by the state of Washington. Submittals submitted to A/E without evidence of Contractor's approval shall be returned for resubmission. Contractor shall

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

review, approve, and submit Submittals with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of Owner or separate contractors. Contractor's submittal schedule shall allow a reasonable time for A/E review. A/E will review, approve, or take other appropriate action on the Submittals. Contractor shall perform no portion of the Work requiring submittal and review of Submittals until the respective submittal has been reviewed and the A/E has approved or taken other appropriate action. Owner and A/E shall respond to Submittal with reasonable promptness. Any Work by Contractor shall be in accordance with reviewed Submittals. Submittals made by Contractor which are not required by the Contract Documents may be returned without action.

- C. Contractor not relieved of responsibility when Submittals approved: Approval, or other appropriate action with regard to Submittals, by Owner or A/E shall not relieve Contractor of responsibility for any errors or omissions in such Submittals, nor from responsibility for compliance with the requirements of the Contract Documents. Unless specified in the Contract Documents, review by Owner or A/E shall not constitute an approval of the safety precautions employed by Contractor during construction, or constitute an approval of Contractor's means or methods of construction. If Contractor fails to obtain approval before installation and the item or work is subsequently rejected, Contractor shall be responsible for all costs of correction.
- D. Variations between Submittals and Contract Documents: Submittals, including product data, samples and similar submissions, are not Contract Documents. If Submittals vary from the requirements of the Contract Documents, Contractor shall describe such variations in writing, separate from the Submittals, at the time it submits the Submittals containing such variations. If Owner approves any such variation, an appropriate Change Order will be issued. If the variation is minor and does not involve an adjustment in the Contract Sum or Contract Time, a Change Order need not be issued; however, the modification shall be approved by Owner in writing and recorded upon the Project Record. Approval for substitutions shall not be sought and shall not be approved through the submission of Submittals.
- E. Contractor to submit 5 copies of Submittals: Unless otherwise provided in Division 1, Contractor shall submit to A/E for approval 5 copies of all Submittals. Unless otherwise indicated, 3 sets of all Submittals shall be retained by A/E and 2 sets shall be returned to Contractor.

4.04 ORGANIZATION OF SPECIFICATIONS

Specification organization by trade: Specifications are prepared in sections which conform generally with trade practices. These sections are for Owner and Contractor convenience and shall not control Contractor in dividing the Work among the Subcontractors or in establishing the extent of the Work to be performed by any trade.

4.05 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS

- A. A/E, not Contractor, owns Copyright of Drawings and Specifications: The Drawings, Specifications, and other documents prepared by A/E are instruments of A/E's service through which the Work to be executed by Contractor is described. Neither Contractor nor any Subcontractor shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by A/E, and A/E shall be deemed the author of them and will, along with any rights of Owner, retain all common law, statutory, and other reserved rights, in addition to the copyright. All copies of these documents, except Contractor's set, shall be returned or suitably accounted for to A/E, on request, upon completion of the Work.
- B. Drawings and Specifications to be used only for this Project: The Drawings, Specifications, and other documents prepared by the A/E, and copies thereof furnished to Contractor, are for use solely with respect to this Project. They are not to be used by Contractor or any Subcontractor on

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

other projects or for additions to this Project outside the scope of the Work without the specific written consent of Owner and A/E. Contractor and Subcontractors are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications, and other documents prepared by A/E appropriate to and for use in the execution of their Work.

- C. License granted to Owner: Contractor and all Subcontractors grant a non-exclusive license to Owner, without additional cost or royalty, to use for its own purposes (including reproduction) all Submittals, together with the information and diagrams contained therein, prepared by Contractor or any Subcontractor. In providing Submittals, Contractor and all Subcontractors warrant that they have authority to grant to Owner a license to use the Submittals, and that such license is not in violation of any copyright or other intellectual property right. Contractor agrees to defend and indemnify Owner pursuant to the indemnity provisions in Section 5.03 and 5.22 from any violations of copyright or other intellectual property rights arising out of Owner's use of the Submittals hereunder, or to secure for Owner, at Contractor's own cost, licenses in conformity with this section.
- D. Submittals to be used only for this Project: Submittals prepared by Contractor, Subcontractors of any tier, or its or their equipment or material suppliers, and copies thereof furnished to Contractor, are for use solely with respect to this Project. They are not to be used by Contractor or any Subcontractor of any tier, or material or equipment supplier, on other projects or for additions to this Project outside the scope of the Work without the specific written consent of Owner. The Contractor, Subcontractors of any tier, and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Submittals appropriate to and for use in the execution of their Work under the Contract Documents.
- E. Electronic Files: If the parties intend to transmit the instruments of service or any other information or documentation in digital form (other than PDF), they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Contract Documents.

PART 5 - PERFORMANCE

5.01 CONTRACTOR CONTROL AND SUPERVISION

- A. Contractor responsible for Means and Methods of construction: Contractor shall supervise and direct the Work, using its best skill and attention, and shall perform the Work in a skillful manner. 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, unless the Contract Documents give other specific instructions concerning these matters. Contractor shall disclose its means and methods of construction when requested by Owner.
- B. Competent superintendent required: Contractor, as soon as practicable after award of the Contract, shall furnish in writing to Owner the name and qualifications of its proposed superintendent. Owner may reply within 14 Days to Contractor in writing stating (1) whether Owner has reasonable objection to the proposed superintendent or (2) that Owner requires additional time to review. Failure of Owner to reply within the 14-Day period shall constitute Notice of no reasonable objection. The superintendent shall not be employed on any other project during the course of the Work. Unless approved by the Owner's representative and only when overseeing projects on the same campus or location where oversight and supervision will not be degraded. Performance of the Work shall be directly supervised by a competent superintendent who shall be in attendance at the Project site during performance of the Work and who has authority to act on behalf of Contractor. Communications given to the superintendent shall be as binding as if given to Contractor. The superintendent must be satisfactory to Owner and shall not be changed without the prior written consent of Owner. Owner may require

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

Contractor to remove the superintendent from the Work or Project site, if Owner reasonably deems the superintendent incompetent, careless, or otherwise objectionable, provided Owner has first notified Contractor in writing and allowed a reasonable period for transition.

- C. Contractor responsible for acts and omissions of self and agents: Contractor shall be responsible to Owner for acts and omissions of Contractor, Subcontractors, and their employees and agents.
- D. Contractor to employ competent and disciplined workforce: Contractor shall enforce strict discipline and good order among all of the Contractor's employees and other persons performing the Work. Contractor shall not permit employment of persons not skilled in tasks assigned to them. Contractor's employees shall at all times conduct business in a manner which assures fair, equal, and nondiscriminatory treatment of all persons. Owner may, by written notice, request Contractor to remove from the Work or Project site any employee Owner reasonably deems incompetent, careless, or otherwise objectionable.
- E. Contractor to keep project documents on site: Contractor shall keep on the Project site a copy of the Drawings, Specifications, addenda, reviewed Submittals, and permits and permit drawings.
- F. Contractor to comply with ethical standards: Contractor shall ensure that its owner(s) and employees, and those of its Subcontractors, comply with the Ethics in Public Service Act RCW 42.52, which, among other things, prohibits state employees from having an economic interest in any public works contract that was made by, or supervised by, that employee. Contractor shall remove, at its sole cost and expense, any of its, or its Subcontractors' employees, if they are in violation of this act.

5.02 PERMITS, FEES, AND NOTICES

- A. Contractor to obtain and pay for permits: Unless otherwise provided in the Contract Documents, Contractor shall secure and pay for the building, any land use permits and all other permits, licenses, and inspections necessary for proper execution and completion of the Work. Prior to Final Acceptance, the approved, signed permits shall be delivered to Owner.
- B. Allowances for permit fees: If allowances for permits or utility fees are called for in the Contract Documents and set forth in Contractor's bid, and the actual costs of those permits or fees differ from the allowances in the Contract Documents, the difference shall be adjusted by Change Order.
- C. Contractor to comply with all applicable laws: Contractor shall comply with and give notices required by all federal, state, and local laws, ordinances, rules, regulations, and lawful orders of public authorities applicable to performance of the Work.
- D. Taxes: Contractor shall pay sales, consumer, use, business and occupation, income and similar taxes for the Work that are legally enacted when the initial Contract Sum is agreed.

5.03 PATENTS AND ROYALTIES

Payment, indemnification, and notice: Contractor is responsible for, and shall pay, all royalties and license fees. Contractor shall defend, indemnify, and hold Owner harmless from any costs, expenses, and liabilities arising out of the infringement by Contractor of any patent, copyright, or other intellectual property right used in the Work; however, provided that Contractor gives prompt notice, Contractor shall not be responsible for such defense or indemnity when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents. If Contractor has reason to believe that use of the required design, process, or product constitutes an infringement of a patent or copyright, it shall promptly notify Owner of such potential infringement.

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

5.04 PREVAILING WAGES

- A. Contractor to pay Prevailing Wages: Contractor shall pay the prevailing rate of wages to all workers, laborers, or mechanics employed in the performance of any part of the Work in accordance with RCW 39.12 and the rules and regulations of the Department of Labor and Industries. The schedule of prevailing wage rates for the locality or localities of the Work, is determined by the Industrial Statistician of the Department of Labor and Industries. It is the Contractor's responsibility to verify the applicable prevailing wage rate.
- B. Statement of Intent to Pay Prevailing Wages: Before payment is made by the Owner to the Contractor for any work performed by the Contractor and subcontractors whose work is included in the application for payment, the Contractor shall submit, or shall have previously submitted to the Owner for the Project, a Statement of Intent to Pay Prevailing Wages, approved by the Department of Labor and Industries, certifying the rate of hourly wage paid and to be paid each classification of laborers, workers, or mechanics employed upon the Work by Contractor and Subcontractors. Such rates of hourly wage shall not be less than the prevailing wage rate.
- C. Affidavit of Wages Paid: Prior to release of retainage, the Contractor shall submit to the Owner an Affidavit of Wages Paid, approved by the Department of Labor and Industries, for the Contractor and every subcontractor that performed work on the Project.
- D. Disputes: Disputes regarding prevailing wage rates shall be referred for arbitration to the Director of the Department of Labor and Industries. The arbitration decision shall be final and conclusive and binding on all parties involved in the dispute as provided for by RCW 39.12.060.
- E. Statement with pay application; Post Statements of Intent at job site: Each Application for Payment submitted by Contractor shall state that prevailing wages have been paid in accordance with the prefilled statement(s) of intent, as approved. Copies of the approved intent statement(s) shall be posted on the job site with the address and telephone number of the Industrial Statistician of the Department of Labor and Industries where a complaint or inquiry concerning prevailing wages may be made.
- F. Contractor to pay for Statements of Intent and Affidavits: In compliance with chapter 296-127 WAC, Contractor shall pay to the Department of Labor and Industries the currently established fee(s) for each statement of intent and/or affidavit of wages paid submitted to the Department of Labor and Industries for certification.
- G. Certified Payrolls: Consistent with WAC 296-127-320, the Contractor and any subcontractor shall submit a certified copy of payroll records if requested.

5.05 HOURS OF LABOR

- A. Overtime: Contractor shall comply with all applicable provisions of RCW 49.28 and they are incorporated herein by reference.

5.06 NONDISCRIMINATION

- A. Discrimination prohibited by applicable laws: Discrimination in all phases of employment is prohibited by, among other laws and regulations, Title VII of the Civil Rights Act of 1964, the Vietnam Era Veterans Readjustment Act of 1974, Sections 503 and 504 of the Vocational Rehabilitation Act of 1973, the Equal Employment Act of 1972, the Age Discrimination Act of 1967, the Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, Presidential Executive Order 11246, Executive Order 11375, the Washington State Law Against Discrimination, RCW 49.60, and Gubernatorial Executive Order 85-09. These laws and

regulations establish minimum requirements for affirmative action and fair employment practices which Contractor must meet.

B. During performance of the Work:

1. Protected Classes: Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, marital status, or the presence of any physical, sensory, or mental disability, Vietnam era veteran status, or disabled veteran status, nor commit any other unfair practices as defined in RCW 49.60.
2. Advertisements to state nondiscrimination: Contractor shall, in all solicitations or advertisements for employees placed by or for it, state that all qualified applicants will be considered for employment, without regard to race, creed, color, national origin, sex, age, marital status, or the presence of any physical, sensory, or mental disability.
3. Contractor to notify unions and others of nondiscrimination: Contractor shall send to each labor union, employment agency, or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union, employment agency, or workers' representative of Contractor's obligations according to the Contract Documents and RCW 49.60.
4. Owner and State access to Contractor records: Contractor shall permit access to its books, records, and accounts, and to its premises by Owner, and by the Washington State Human Rights Commission, for the purpose of investigation to ascertain compliance with this section of the Contract Documents.
5. Pass through provisions to Subcontractors: Contractor shall include the provisions of this section in every Subcontract.

5.07 SAFETY PRECAUTIONS

- A. Contractor responsible for safety: Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work. Contractor shall be solely and completely responsible for conditions of the Project site, including safety of all persons and property, during performance of the Work. Contractor shall maintain the Project site and perform the Work in a manner that meets statutory and common-law requirements for the provision of a safe place to work. This requirement shall apply continuously and not be limited to working hours. Any review by Owner or A/E of Contractor's performance shall not be construed to include a review of the adequacy of Contractor's safety measures in, on or near the site of the Work.
- B. Contractor safety responsibilities: In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the Work and other persons who may be affected by the Work; prevent damage to materials, supplies, and equipment whether on site or stored off-site; and prevent damage to other property at the site or adjacent thereto. Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss; shall erect and maintain all necessary safeguards for such safety and protection; and shall notify owners of adjacent property and utilities when prosecution of the Work may affect them.
- C. Contractor to maintain safety records: Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

any such incident to Owner. Owner shall, at all times, have a right of access to all records of exposure.

- D. Contractor to provide HazMat training: Contractor shall provide all persons working on the Project site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
1. Information. At a minimum, Contractor shall inform persons working on the Project site of:
 - a. WAC: The requirements of chapter 296-62 WAC, General Occupational Health Standards;
 - b. Presence of hazardous chemicals: Any operations in their work area where hazardous chemicals are present; and
 - c. Hazard communications program: The location and availability of written hazard communication programs, including the required list(s) of hazardous chemicals and material safety data sheets required by chapter 296-62 WAC.
 2. Training. At a minimum, Contractor shall provide training for persons working on the Project site which includes:
 - a. Detecting hazardous chemicals: Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);
 - b. Hazards of chemicals: The physical and health hazards of the chemicals in the work area;
 - c. Protection from hazards: The measures such persons can take to protect themselves from these hazards, including specific procedures Contractor, or its Subcontractors, or others have implemented to protect those on the Project site from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and
 - d. Hazard communications program: The details of the hazard communications program developed by Contractor, or its Subcontractors, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.
- E. Hazardous, toxic or harmful substances: Contractor's responsibility for hazardous, toxic, or harmful substances shall include the following duties:
1. Illegal use of dangerous substances: Contractor shall not keep, use, dispose, transport, generate, or sell on or about the Project site, any substances now or hereafter designated as, or which are subject to regulation as, hazardous, toxic, dangerous, or harmful by any federal, state or local law, regulation, statute or ordinance (hereinafter collectively referred to as "hazardous substances"), in violation of any such law, regulation, statute, or ordinance, but in no case shall any such hazardous substance be stored more than 90 Days on the Project site.

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

2. Contractor notifications of spills, failures, inspections, and fines: Contractor shall promptly notify Owner of all spills or releases of any hazardous substances which are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify Owner of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project site.
- F. Public safety and traffic: All Work shall be performed with due regard for the safety of the public. Contractor shall perform the Work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians. All arrangements to care for such traffic shall be Contractor's responsibilities. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.
- G. Contractor to act in an emergency: In an emergency affecting the safety of life or the Work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if so authorized or instructed.
- H. No duty of safety by Owner or A/E: Nothing provided in this Section 5.07 shall relieve Contractor of sole and complete responsibility for safety at the Project site, for sole and complete responsibility for any violation of safety or property protection requirements or the correction thereof, or impose any duty upon Owner or A/E with regard to, or as constituting any express or implied assumption of control or responsibility over, any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public. Any Notice Owner or A/E gives to Contractor of a safety or property protection violation will not: (1) relieve Contractor of sole and complete responsibility for the violation and the correction thereof, or for sole liability for the consequences of said violation; (2) impose any obligation upon Owner or A/E to inspect or review Contractor's safety program or precautions or to enforce Contractor's compliance with the requirements of this Section 5.07; or (3) impose any continuing obligation upon Owner or A/E to provide such Notice to Contractor or any other persons or entity.

5.08 OPERATIONS, MATERIAL HANDLING, AND STORAGE AREAS

- A. Limited storage areas: Contractor shall confine all operations, including storage of materials, to Owner-approved areas.
- B. Temporary buildings and utilities at Contractor expense: Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be provided by Contractor only with the consent of Owner and without expense to Owner. The temporary buildings and utilities shall be removed by Contractor at its expense upon completion of the Work.
- C. Roads and vehicle loads: Contractor shall use only established roadways or temporary roadways authorized by Owner. When materials are transported in prosecuting the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by federal, state, or local law or regulation.
- D. Ownership and reporting by Contractor of demolished materials: Ownership and control of all materials or facility components to be demolished or removed from the Project site by Contractor shall immediately vest in Contractor upon severance of the component from the facility or severance of the material from the Project site. Contractor shall be responsible for compliance with all laws governing the storage and ultimate disposal. Contractor shall provide Owner with a copy of all manifests and receipts evidencing proper disposal when required by Owner or applicable law.

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

- E. Contractor responsible for care of materials and equipment on-site: Contractor shall be responsible for the proper care and protection of its materials and equipment delivered to the Project site. Materials and equipment may be stored on the premises subject to approval of Owner. When Contractor uses any portion of the Project site as a shop, Contractor shall be responsible for any repairs, patching, or cleaning arising from such use.
- F. Contractor responsible for loss of materials and equipment: Contractor shall protect and be responsible for any damage or loss to the Work, or to the materials or equipment until the date of Substantial Completion, and shall repair or replace without cost to Owner any damage or loss that may occur, except damages or loss caused by the acts or omissions of Owner. Contractor shall also protect and be responsible for any damage or loss to the Work, or to the materials or equipment, after the date of Substantial Completion, and shall repair or replace without cost to Owner any such damage or loss that might occur, to the extent such damages or loss are caused by the acts or omissions of Contractor, or any Subcontractor.

5.09 PRIOR NOTICE OF EXCAVATION

- A. Excavation defined; Use of locator services: "Excavation" means an operation in which earth, rock, or other material on or below the ground is moved or otherwise displaced by any means, except the tilling of soil less than 12 inches in depth for agricultural purposes, or road ditch maintenance that does not change the original road grade or ditch flow line. Before commencing any excavation, Contractor shall provide notice of the scheduled commencement of excavation to all owners of underground facilities or utilities, through locator services.

5.10 UNFORESEEN PHYSICAL CONDITIONS

- A. Notice requirement for concealed or unknown conditions: If Contractor encounters conditions at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then Contractor shall give written notice to Owner promptly and in no event later than 7 Days after the first observance of the conditions. Conditions shall not be disturbed prior to such notice.
- B. Adjustment in Contract Time and Contract Sum: If such conditions differ materially and cause a change in Contractor's cost of, or time required for, performance of any part of the Work, the Contractor may be entitled to an equitable adjustment in the Contract Time or Contract Sum, or both, provided it makes a request therefore as provided in Part 7.

5.11 PROTECTION OF EXISTING STRUCTURES, EQUIPMENT, VEGETATION, UTILITIES AND IMPROVEMENTS

- A. Contractor to protect and repair property: At all times until Owner's occupancy of the Work or a designated portion of the Work, Contractor shall protect the Work from damage, weather, deterioration, theft, vandalism and malicious mischief and shall bear the risk of any uninsured loss or destruction of, or injury or damage to, all materials, equipment, tools, and other items incorporated or to be incorporated in the Work or designated portion, or consumed or used in the performance of the Work or designated portion, including all Work in process and completed Work. Contractor shall protect from damage all existing structures, equipment, improvements, utilities, streets, curbs, walks and vegetation at or near the Project site or on adjacent property of a third party, the locations of which are made known to or should be known by Contractor. Contractor shall repair any damage, including that to the property of a third party, resulting from failure to comply with the requirements of the Contract Documents or failure to exercise reasonable care in performing the Work. If Contractor fails or refuses to repair the damage

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

promptly, Owner may have the necessary work performed and charge the cost to Contractor. If a governmental authority having jurisdiction requires that the repairing and patching be done with its own labor and/or materials, Contractor shall abide by such regulations, and it shall pay for this work at no additional cost to Owner.

- B. Tree and vegetation protection: Contractor shall only remove trees when specifically authorized to do so, and shall protect vegetation that will remain in place.
- C. Special site conditions: If, in the course of the Work, Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, Contractor shall immediately suspend any operations that would affect them and shall notify Owner and A/E. Upon receipt of such Notice, Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. Contractor shall continue to suspend these operations until otherwise instructed by Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Part 8.

5.12 LAYOUT OF WORK

- A. Advanced planning of the Work: Contractor shall plan and lay out the Work in advance of operations so as to coordinate all work without delay or revision.
- B. Layout responsibilities: Contractor shall lay out the Work from Owner-established baselines and bench marks indicated on the Drawings, and shall be responsible for all field measurements in connection with the layout. Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the Work. Contractor shall be responsible for executing the Work to the lines and grades that may be established. Contractor shall be responsible for maintaining or restoring all stakes and other marks established.

5.13 MATERIAL AND EQUIPMENT

- A. Contractor to provide new and equivalent equipment and materials: All equipment, material, and articles incorporated into the Work shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in the Contract Documents. References in the Specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard quality and shall not be construed as limiting competition. Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of A/E and after submittal and approval of a substitute request, is equal to that named in the Specifications, unless otherwise specifically provided in the Contract Documents.
- B. Contractor responsible for fitting parts together: Contractor shall do all cutting, fitting, or patching that may be required to complete the Work or to make its several parts fit together properly, or receive or be received by work of others set forth in, or reasonably implied by, the Contract Documents. Contractor shall not damage or endanger any work of Owner or separate contractors by cutting, excavating, or otherwise altering the Work and shall not cut or alter the work of any other contractor unless approved in advance by Owner. Contractor shall restore all areas requiring cutting, fitting and patching to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.
- C. Owner may reject defective Work: Should any of the Work be found defective, or in any way not in accordance with the Contract Documents, this Work, in whatever stage of completion, may be

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

rejected by Owner. However, neither this authority of Owner nor a decision made either to exercise or not to exercise such authority shall give rise to a duty or responsibility of Owner or its representatives to Contractor, Subcontractors, their agents or employees, or other persons or entities performing portions of the Work.

5.14 AVAILABILITY AND USE OF UTILITY SERVICES

- A. Owner to provide and charge for utilities: Owner shall make all reasonable utilities available to Contractor from existing outlets and supplies, as specified in the Contract Documents. Unless otherwise provided in the Contract Documents, the utility service consumed shall be charged to or paid for by Contractor at prevailing rates charged to Owner or, where the utility is produced by Owner, at reasonable rates determined by Owner. Contractor will carefully conserve any utilities furnished.
- B. Contractor to install temporary connections and meters: Contractor shall, at its expense and in a skillful manner satisfactory to Owner, install and maintain all necessary temporary connections and distribution lines, together with appropriate protective devices, and all meters required to measure the amount of each utility used for the purpose of determining charges. Prior to the date of Final Acceptance, Contractor shall remove all temporary connections, distribution lines, meters, and associated equipment and materials.

5.15 TESTS AND INSPECTION

- A. Contractor to provide for all testing and inspection of Work: Contractor shall maintain an adequate testing and inspection program and perform such tests and inspections as are necessary or required to ensure that the Work conforms to the requirements of the Contract Documents. Contractor shall be responsible for inspection and quality surveillance of all its Work and all Work performed by any Subcontractor. Unless otherwise provided, Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. Contractor shall give Owner timely notice of when and where tests and inspections are to be made. Contractor shall maintain complete inspection records and make them available to Owner.
- B. Owner may conduct tests and inspections: Owner may, at any reasonable time, conduct such inspections and tests as it deems necessary to ensure that the Work is in accordance with the Contract Documents. Owner shall promptly notify Contractor if an inspection or test reveals that the Work is not in accordance with the Contract Documents. Unless the subject items are expressly accepted by Owner, such Owner inspection and tests are for the sole benefit of Owner and do not:
1. Constitute or imply acceptance;
 2. Relieve Contractor of responsibility for providing adequate quality control measures;
 3. Relieve Contractor of responsibility for risk of loss or damage to the Work, materials, or equipment;
 4. Relieve Contractor of its responsibility to comply with the requirements of the Contract Documents; or
 5. Impair Owner's right to reject defective or nonconforming items, or to avail itself of any other remedy to which it may be entitled.

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

- C. Inspections or inspectors do not modify Contract Documents: Neither observations by an inspector retained by Owner, the presence or absence of such inspector on the site, nor inspections, tests, or approvals by others, shall relieve Contractor from any requirement of the Contract Documents, nor is any such inspector authorized to change any term or condition of the Contract Documents.
- D. Contractor responsibilities on inspections: Contractor shall promptly furnish, without additional charge, all facilities, labor, material and equipment reasonably needed for performing such safe and convenient inspections and tests as may be required by Owner. Owner may charge Contractor any additional cost of inspection or testing when Work is not ready at the time specified by Contractor for inspection or testing, or when prior rejection makes reinspection or retest necessary. Owner shall perform its inspections and tests in a manner that will cause no undue delay in the Work.

5.16 CORRECTION OF NONCONFORMING WORK

- A. Work covered by Contractor without inspection: If a portion of the Work is covered contrary to the request of Owner or the requirements in the Contract Documents or a governmental authority having jurisdiction, it must, if required in writing by Owner, be uncovered for Owner's observation and be replaced at Contractor's expense and without change in the Contract Sum or Contract Time.
- B. Payment provisions for uncovering covered Work: If, at any time prior to Final Completion, Owner desires to examine the Work, or any portion of it, which has been covered, Owner may request to see such Work and it shall be uncovered by Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an adjustment in the Contract Sum for the costs of uncovering and replacement, and, if completion of the Work is thereby delayed, an adjustment in the Contract Time, provided it makes such a request as provided in Part 7. If such Work is not in accordance with the Contract Documents, the Contractor shall pay the costs of examination and reconstruction.
- C. Contractor to correct and pay for non-conforming Work: Contractor shall promptly correct Work found by Owner not to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed, or completed. Contractor shall bear all costs of correcting such nonconforming Work, including additional testing and inspections.
- D. Contractor's compliance with correction and warranty provisions: If, within one year after the date of Substantial Completion of the Work or designated portion thereof, or within one year after the date for commencement of any system warranties established under Section 6.08, or within the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, Contractor shall correct it promptly after receipt of written Notice from Owner to do so. Owner shall give such Notice promptly after discovery of the condition. This period of one year shall be extended, with respect to portions of Work first performed after Substantial Completion, by the period of time between Substantial Completion and the actual performance of the Work. Contractor's duty to correct with respect to Work repaired or replaced shall run for one year from the date of repair or replacement. Obligations under this Section 5.16D shall survive Final Acceptance and are in addition to other warranties provided by contract or law.
- E. Contractor to remove non-conforming Work: Contractor shall remove from the Project site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by Contractor nor accepted by Owner.

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

- F. Owner may charge Contractor for non-conforming Work: If Contractor fails to correct nonconforming Work within a reasonable time after written notice to do so, Owner may replace, correct, or remove the nonconforming Work and charge the cost thereof to the Contractor.
- G. Contractor to pay for damaged Work during correction: Contractor shall bear the cost of correcting destroyed or damaged Work, whether completed or partially completed, caused by Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.
- H. No Period of limitation on other requirements: Nothing contained in this section shall be construed to establish a period of limitation with respect to other obligations which Contractor might have according to the Contract Documents. Establishment of the time period of one year as described in Section 5.16D relates only to the specific obligation of Contractor to correct the Work, and has no relationship to the time within which the Contractor's obligation to comply with the Contract Documents may be sought to be enforced, including the time within which such proceedings may be commenced.
- I. Owner may accept non-conforming Work and charge Contractor: If Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, Owner may do so instead of requiring its removal and correction, in which case the Contract Sum may be reduced as appropriate and equitable.

5.17 CLEAN UP

Contractor to keep site clean and leave it clean: Contractor shall at all times keep the Project site, including hauling routes, infrastructures, utilities, and storage areas, free from accumulations of waste materials. Before completing the Work, Contractor shall remove from the premises its rubbish, tools, scaffolding, equipment, and materials. Upon completing the Work, Contractor shall leave the Project site in a clean, neat, and orderly condition satisfactory to Owner. If Contractor fails to clean up as provided herein, and after reasonable notice from Owner, Owner may do so and the cost thereof shall be charged to Contractor.

5.18 ACCESS TO WORK

Owner and A/E access to Work site: Contractor shall provide Owner and A/E access to the Work in progress wherever located.

5.19 OTHER CONTRACTS

Owner may award other contracts; Contractor to cooperate: Owner may undertake or award other contracts for additional work at or near the Project site. Owner shall help coordinate the activities of Owner's own forces and of each separate contractor engaged by Owner with the Work of Contractor, who shall reasonably cooperate with the other contractors and with Owner's employees and shall carefully adapt scheduling and perform the Work in accordance with these Contract Documents to reasonably accommodate the other work.

5.20 SUBCONTRACTORS AND SUPPLIERS

- A. Subcontractor Responsibility: The Contractor shall include the language of this paragraph in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the Contractor shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this paragraph apply to all subcontractors

regardless of tier. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:

1. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
 2. Have a current Washington Unified Business Identifier (UBI) number;
 3. If applicable, have:
 - a. Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;
 - b. A Washington Employment Security Department number, as required in Title 50 RCW;
 - c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
 - d. An electrical contractor license, if required by Chapter 19.28 RCW;
 - e. An elevator contractor license, if required by Chapter 70.87 RCW.
 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3).
 5. On a project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the date of the Owner's first advertisement of the project.
 6. Meet all supplemental responsibility criteria set forth in the Contract Documents.
- B. Provide names of Subcontractors and use qualified firms: Before submitting the first Application for Payment, Contractor shall furnish in writing to Owner the names, addresses, and telephone numbers of all Subcontractors, as well as suppliers providing materials in excess of \$2,500. Contractor shall utilize Subcontractors and suppliers which are experienced and qualified, and meet the requirements of the Contract Documents, if any. Contractor shall not utilize any Subcontractor or supplier to whom Owner has a "reasonable objection," and shall obtain Owner's written consent before making any substitutions or additions. A "reasonable objection" shall include without limitation:
- .1 a proposed Subcontractor differing from the entity listed with a proposal or bid,
 - .2 lack of "responsibility" of the proposed Subcontractor, as defined in RCW 39.04.350 or otherwise in the Contract Documents, or
 - .3 lack of qualification, including technical qualification, as required by the Specifications.
- C. Subcontracts in writing and pass through provision: All Subcontracts must be in writing. By appropriate written agreement, Contractor shall require each Subcontractor, so far as applicable to the Work to be performed by the Subcontractor, to be bound to Contractor by terms of the

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

Contract Documents, and to assume toward Contractor all the obligations and responsibilities which Contractor assumes toward Owner in accordance with the Contract Documents. Each Subcontract shall preserve and protect the rights of Owner in accordance with the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. However, nothing in this paragraph shall be construed to alter the contractual relations between Contractor and its Subcontractors with respect to insurance or bonds.

- D. Coordination of Subcontractors; Contractor responsible for Work: Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors. No Subcontracting of any of the Work shall relieve Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents or any other obligations of the Contract Documents.
- E. Automatic assignment of subcontracts: Each subcontract agreement for a portion of the Work is hereby assigned by Contractor to Owner provided that:
1. Effective only after termination and Owner approval: The assignment is effective only after termination by Owner for cause pursuant to Section 9.01 and only for those Subcontracts which Owner accepts by notifying the Subcontractor in writing; and
 2. Owner assumes Contractor's responsibilities: After the assignment is effective, Owner will assume all future duties and obligations toward the Subcontractor which Contractor assumed in the Subcontract.
 3. Impact of bond: The assignment is subject to the prior rights of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.

5.21 WARRANTY OF CONSTRUCTION

- A. Contractor warranty of Work: In addition to any special warranties provided elsewhere in the Contract Documents, Contractor warrants that all Work conforms to the requirements of the Contract Documents and is free of any defect in equipment, material, or design furnished, or workmanship performed by Contractor.
- B. Contractor responsibilities: With respect to all warranties, express or implied, for Work performed or materials furnished according to the Contract Documents, Contractor shall:
1. Obtain warranties: Obtain, assign if requested, and furnish directly to Owner, all warranties that would be given in normal commercial practice or that are required by the Contract Documents, first executed by the applicable Subcontractor and those suppliers and manufacturers furnishing materials for the Work, and subsequently countersigned by Contractor, which shall extend to Owner all rights, claims, benefits and interests that Contractor may have under express or implied warranties or guarantees against the Subcontractor, supplier or manufacturer for defective or non-conforming Work;
 2. Warranties for benefit of Owner: Require all warranties to be executed, in writing, for the benefit of Owner;
 3. Enforcement of warranties: Enforce all warranties for the benefit of Owner, if directed by Owner; and

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

4. Contractor responsibility for subcontractor warranties: Be responsible to enforce any subcontractor's, manufacturer's, or supplier's warranties should they extend beyond the period specified in the Contract Documents.
- C. Warranties beyond Final Acceptance: The obligations under this section shall survive Final Acceptance.

5.22 INDEMNIFICATION

- A. Contractor to indemnify Owner: To the fullest extent permitted by law, Contractor shall defend, indemnify, and hold Owner and A/E, their consultants, and agents and employees, directors, officers, lenders, successors and assigns of any of them (collectively, the "Indemnified Parties"), harmless from and against all third-party claims, demands, losses, damages, or costs, including but not limited to damages arising out of bodily injury or death to persons and damage to property, direct and indirect, or consequential (including but not limited to costs and attorneys' fees incurred on such claims or in proving the right to indemnification), arising out of, caused by or resulting from:
1. Sole negligence of Contractor: The sole negligence or willful misconduct of Contractor or any of its Subcontractors, their agents and anyone directly or indirectly employed by them or anyone for whose acts they may be liable ("Indemnitor");
 2. Concurrent negligence: The concurrent negligence of Indemnitor, but only to the extent of the negligence of Indemnitor; and
 3. Patent infringement: The use of any design, process, or equipment that constitutes an infringement of any United States patent presently issued, or violates any other proprietary interest, including copyright, trademark, and trade secret, unless specifically directed to use such design, process, or equipment by Owner.

The obligations of Contractor under this Section 5.22 shall not be construed to negate, abridge, or otherwise reduce any other right or obligations of indemnity that would otherwise exist as to any party or person described in this Section. To the extent the wording of this Section 5.22 would reduce or eliminate the insurance coverage of Owner or Contractor, this Section 5.22 shall be considered modified to the extent that such insurance coverage is not affected. To the extent that any portion of this Section 5.22 is stricken by a court or arbitrator for any reason, all remaining provisions shall retain their vitality and effect. The provisions of this Section 5.22 shall survive completion, acceptance, final payment and termination of the Contract.

- B. Employee action and RCW Title 51: In any action against Owner and any other entity indemnified in accordance with this section, by any employee of Contractor, its Subcontractors, Sub-subcontractors, agents, or anyone directly or indirectly employed by any of them, the indemnification obligation of this section shall not be limited by a limit on the amount or type of damages, compensation, or benefits payable by or for Contractor or any Subcontractor under RCW Title 51, the Industrial Insurance Act, or any other employee benefit acts. In addition, Contractor waives immunity as to Owner and A/E only, in accordance with RCW Title 51.

PART 6 - PAYMENTS AND COMPLETION

6.01 CONTRACT SUM

Owner shall pay Contract Sum: Owner shall pay Contractor the Contract Sum plus Washington State sales tax for performance of the Work, in accordance with the Contract Documents.

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

6.02 SCHEDULE OF VALUES

Contractor to submit Schedule of Values: Before submitting its first Application for Payment, Contractor shall submit to Owner for approval a breakdown allocating the total Contract Sum to each principal category of work, in such detail as requested by Owner ("Schedule of Values"). The approved Schedule of Values shall allocate at least the percentage of the original Contract Sum so designated in the Contract Documents to that portion of the Work between Substantial Completion and Final Completion to recognize not-yet-earned costs for demobilization, Project Record, O&M manuals, and any other requirements for Project closeout and in advancing the Work from Substantial Completion to Final Completion. The approved Schedule of Values shall be used by Owner as a basis for reviewing progress payments. Payment for Work shall be made only for and in accordance with those items included in the Schedule of Values.

6.03 APPLICATION FOR PAYMENT

- A. Monthly Application for Payment with substantiation: At monthly intervals, unless determined otherwise by Owner, Contractor shall submit to Owner an itemized Application for Payment for Work (using Owner's form) completed in accordance with the Contract Documents and the approved Schedule of Values. Each application shall be supported by such substantiating data as Owner may require.
- B. Contractor certifies Subcontractors paid: By submitting an Application for Payment, Contractor is certifying that all Subcontractors have been paid, less earned retainage in accordance with RCW 60.28.011, as their interests appeared in the last preceding Application for Payment. By submitting an Application for Payment, Contractor is recertifying that the representations set forth in Section 1.03 are true and correct, to the best of Contractor's knowledge, as of the date of the Application for Payment. Owner has the right to request written evidence from Contractor that Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by Owner to Contractor for subcontracted Work. Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Owner shall not have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.
- C. Reconciliation of Work with Progress Schedule: At the time it submits an Application for Payment, Contractor shall analyze and reconcile, to the satisfaction of Owner, the actual progress of the Work with the Progress Schedule. The submission of an Application for Payment constitutes a certification that the Work is current on the Progress Schedule.
- D. Payment for material delivered to site or stored off-site: If authorized by Owner, the Application for Payment may include request for payment for material delivered to the Project site and suitably stored, or for completed preparatory work. Payment may similarly be requested for material stored off the Project site, provided Contractor complies with or furnishes satisfactory evidence of the following:
1. Suitable facility or location: The material will be placed in a facility or location that is structurally sound, dry, lighted and suitable for the materials to be stored or otherwise approved by Owner;
 2. Facility or location within 10 miles of Project: The facility or location is located within a 10-mile radius of the Project. Other locations may be utilized, if approved in writing, by Owner;

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

3. Facility or location exclusive to Project's materials: Only materials for the Project are stored within the facility or location (or a secure portion of a facility or location set aside for the Project);
4. Insurance provided on materials in facility or location: Contractor furnishes Owner a certificate of insurance extending Contractor's insurance coverage for damage, fire, and theft to cover the full value of all materials stored, or in transit;
5. Facility or location locked and secure: The facility or location (or secure portion thereof) is continuously under lock and key, and only Contractor's authorized personnel shall have access;
6. Owner right of access to facility or location: Owner shall at all times have the right of access in company of Contractor;
7. Contractor assumes total responsibility for stored materials: Contractor and its surety assume total responsibility for the stored materials; and
8. Contractor provides documentation and Notice when materials moved to site: Contractor furnishes to Owner certified lists of materials stored, bills of lading, invoices, and other information as may be required, and shall also furnish Notice to Owner when materials are moved from storage to the Project site.

6.04 PROGRESS PAYMENTS

- A. Owner to pay within 30 Days: Owner shall make progress payments, in such amounts as Owner determines are properly due, within 30 Days after receipt of a properly executed Application for Payment. Owner shall notify Contractor in accordance with chapter 39.76 RCW if the Application for Payment does not comply with the requirements of the Contract Documents.
- B. Withholding retainage; Options for retainage: Owner shall retain 5% of the amount of each progress payment until 45 Days after Final Acceptance and receipt of all documents required by law or the Contract Documents, including, at Owner's request, consent of surety to release of the retainage. In accordance with chapter 60.28 RCW, Contractor may request that monies reserved be retained in a fund by Owner, deposited by Owner in a bank or savings and loan, or placed in escrow with a bank or trust company to be converted into bonds and securities to be held in escrow with interest to be paid to Contractor. Owner may permit Contractor to provide an appropriate bond in lieu of the retained funds.
- C. Title passes to Owner upon payment: Title to all Work and materials covered by a progress payment shall pass to Owner at the time of such payment free and clear of all liens, claims, security interests, and encumbrances. Passage of title shall not, however, relieve Contractor from any of its duties and responsibilities for the Work or materials, or waive any rights of Owner to insist on full compliance by Contractor with the Contract Documents. A progress payment, or partial or entire use or occupancy of the Project by Owner, shall not constitute acceptance of Work.
- D. Interest on unpaid balances: Payments due and unpaid in accordance with the Contract Documents shall bear interest as specified in chapter 39.76 RCW.

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

6.05 PAYMENTS WITHHELD

- A. Owner's right to withhold payment: Owner may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any payment to such extent as may be necessary to protect Owner from loss or damage for reasons including but not limited to:
1. Non-compliant Work: Work not in accordance with the Contract Documents;
 2. Remaining Work to cost more than unpaid balance: Reasonable evidence that the Work required by the Contract Documents cannot be completed for the unpaid balance of the Contract Sum;
 3. Owner correction or completion of Work: Work by Owner to correct defective Work or complete the Work in accordance with Section 5.16;
 4. Third party claims for which Contractor may be responsible: Claims (except where an insurer has unconditionally accepted coverage without prior payment of any deductibles or self-insured retentions) filed or reasonable evidence indicating probable filing of such claims unless Contractor provides security acceptable to Owner;
 5. Failure to pay Subcontractor: The failure of Contractor to make payments to Subcontractors for labor, materials or equipment;
 6. Damages: Damage to Owner or a separate contractor (except where an insurer has unconditionally accepted coverage);
 7. Affidavits of Wages Paid: Failure to submit affidavits pertaining to wages paid as requested or otherwise required by statute;
 8. Progress Schedule: Failure to submit a properly updated Progress Schedule;
 9. Maintenance of Project Record: Failure to properly maintain as the Project Record;
 10. Other construction records: Failure to properly submit any other required construction reports or records;
 11. Certified payrolls: Failure to properly submit certified payrolls when requested;
 12. Contractor's failure to perform: Contractor's failure otherwise to perform in accordance with the Contract Documents; or
 13. Contractor's negligent acts or omissions: Cost or liability that may occur to Owner as the result of Contractor's fault or negligent acts or omissions.
- B. Owner to notify Contractor of withholding for unsatisfactory performance: In any case where part or all of a payment is going to be withheld for unsatisfactory performance, Owner shall notify Contractor in accordance with chapter 39.76 RCW.

6.06 RETAINAGE, BOND CLAIM RIGHTS, AND LIENS

- A. Chapters 39.08 RCW and 60.28 RCW incorporated by reference: Chapters 39.08 RCW and 60.28 RCW, concerning the rights and responsibilities of Contractor and Owner with regard to the performance and payment bonds and retainage, are made a part of the Contract Documents by reference as though fully set forth herein.

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

- B. Liens: Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials or other items in connection with the performance of the Work (including, but not limited to, any Subcontractors) to the extent that Owner has paid Contractor for this Work. Owner may, at its option, withhold payment, in whole or in part, to Contractor until lien and claim releases are furnished. Contractor may provide other security acceptable to Owner, such as a bond, in lieu of paying disputed liens or claims. Contractor shall defend, indemnify, and hold harmless Owner from any liens, including all expenses and attorneys' fees, except to the extent a lien has been recorded because of a failure of payment by Owner for the Work implicated in any such lien.

6.07 SUBSTANTIAL COMPLETION

- A. Substantial Completion defined: Substantial Completion is the stage in the progress of the Work (or portion thereof designated and approved by Owner) when the construction is sufficiently complete, in accordance with the Contract Documents, so Owner has full and unrestricted use and benefit of the facilities (or portion thereof designated and approved by Owner) for the use for which it is intended, the Project has been constructed in substantial accordance with the Contract Documents, and at a minimum the following elements have been accomplished (see also, Section 01 70 00 Project Completion):

1. A written punch list has been prepared;
2. The Authority Having Jurisdiction has granted a certificate of occupancy; and
3. The first final draft of the Operation and Maintenance manuals has been submitted to Owner.

All Work other than incidental corrective or punch list work shall be completed. Substantial Completion shall not have been achieved if the Work cannot achieve Final Completion within the time specified in the Agreement. The date Substantial Completion is achieved shall be established in writing by Owner. Contractor may request an early date of Substantial Completion which must be approved by Change Order. Owner's occupancy of the Work or designated portion thereof does not necessarily indicate that Substantial Completion has been achieved.

- B. Contractor to provide weekly reports before Substantial Completion: Beginning at least 30 Days before the scheduled date of Substantial Completion, Contractor shall prepare reports weekly, identifying items to be completed in order to obtain necessary occupancy certificates and permits, and make recommendations to Owner for effectuating the earliest possible completion. When Contractor considers that the Work, or a portion thereof that Owner agrees to accept separately, has achieved Substantial Completion, Contractor shall prepare and submit to Owner a comprehensive list of items to be completed or corrected prior to final payment. Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on the list does not alter the responsibility of Contractor to complete all Work in accordance with the Contract Documents.
- C. Owner to determine if Work is complete: Upon receipt of Contractor's list, Owner will make an inspection to determine whether the Work or designated portion thereof has achieved Substantial Completion. If Owner's inspection discloses any item, whether or not included on Contractor's list, that is not sufficiently complete in accordance with the Contract Documents so that Owner can occupy or utilize the Work or designated portion thereof for its intended use, Contractor shall, before the occurrence of Substantial Completion, complete or correct the item upon notification by Owner, and Contractor shall then submit a request for another inspection by Owner to determine Substantial Completion. If Owner determines that the Work or designated portion has not achieved Substantial Completion, Contractor shall expeditiously complete the Work or

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

designated portion, again request an inspection, and pay the costs associated with the re-inspection.

- D. Owner may take over punch list: If, at 30 Days after the date of Substantial Completion, Owner considers that the remaining items on its list ("punch list") are unlikely to be completed within the time period specified in the Contract Documents for Final Completion, Owner may, upon seven Days' written Notice to Contractor, take over and perform some or all of the punch list items. If Contractor fails to correct the deficiencies within the time period specified, Owner may deduct the actual cost of performing this punch list work, including any design costs, plus ten 10% to account for Owner's transaction costs, from the Contract Sum.
- E. Owner to establish date of Substantial Completion: When the Work or designated portion thereof has achieved Substantial Completion, Owner shall establish the date of Substantial Completion in writing, establish responsibilities of Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and fix the time within which Contractor shall finish all items on the list accompanying the document. The writing establishing Substantial Completion shall be submitted to Contractor for its written acceptance of the responsibilities assigned to it. Any items not included in the document but required or necessary for Final Completion of the Work shall be supplied and installed by Contractor as a part of the Contract Sum, notwithstanding their not being included in the punch list. Upon written acceptance of the writing establishing Substantial Completion by Contractor and Owner, and upon Contractor's Application for Payment, Owner shall make payment as provided in the Contract Documents. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents. No further payment will be due or owing until the payment following Final Completion.
- F. Contractor to complete punch list in timely manner: Contractor shall prepare, continue to monitor, and cause to be completed, all punch lists with respect to the activity of each Subcontractor and report weekly to Owner on outstanding punch list items.

6.08 PRIOR OCCUPANCY

- A. Prior Occupancy defined; Restrictions: Owner may, when legally permissible to do so and upon written Notice to Contractor, take possession of or use any completed or partially completed portion of the Work ("Prior Occupancy") at any time prior to Substantial Completion, and Contractor shall cooperate with such occupancy and use and the establishment of a punch list. Unless otherwise agreed in writing, Prior Occupancy shall not: be deemed an acceptance of any portion of the Work; accelerate the time for any payment to Contractor; prejudice any rights of Owner provided by any insurance, bond, guaranty, or the Contract Documents; relieve Contractor of the risk of loss or any of the obligations established by the Contract Documents; establish a date of Substantial or Final Completion; establish a date for termination or partial termination of the assessment of liquidated damages; or constitute a waiver of claims.
- B. Damage; Duty to repair and warranties: Notwithstanding anything in the preceding paragraph, Owner shall be responsible for loss of or damage to the Work resulting from Prior Occupancy. Contractor's one year duty to repair any system warranties shall begin on building systems activated and used by Owner as agreed in writing by Owner and Contractor.

6.09 FINAL COMPLETION, ACCEPTANCE, AND PAYMENT

- A. Final Completion defined: Final Completion shall be achieved when the Work is fully and finally complete in accordance with the Contract Documents. The date Final Completion is achieved shall be established by Owner in writing, but in no case shall it constitute Final Acceptance, which is a subsequent, separate, and distinct action (see also, Section 01 70 00 Project Completion).

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

- B. Final Acceptance defined: Unless otherwise determined by Owner, Final Acceptance shall be achieved after Contractor has completed all the requirements of the Contract Documents. The date Final Acceptance is achieved shall be established by Owner in writing. Pursuant to RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," completion of the Contract Work shall occur upon Final Acceptance. Neither Final Acceptance nor final payment shall release Contractor or its sureties from any obligations of these Contract Documents or the payment and performance bonds, or constitute a waiver of any claims by Owner arising from Contractor's failure to perform the Work in accordance with the Contract Documents (see also, Section 01 70 00 Project Completion).
- C. Final payment waives Claim rights: Acceptance of final payment by Contractor or any Subcontractor shall constitute a waiver and release to Owner of all claims by Contractor or any such Subcontractor for an increase in the Contract Sum or the Contract Time, and for every act or omission of Owner relating to or arising out of the Work, except for those Claims made in accordance with the procedures, including the time limits, set forth in Part 8.

PART 7 - CHANGES

7.01 CHANGE IN THE WORK

- A. Changes in the Work: Changes in the Work may be accomplished after execution of the Contract without invalidating the Contract. Changes in the Work that adjust the Contract Sum and/or Contract Time are incorporated into the Contract solely by Change Order and are subject to the limitations stated in this Part 7 and elsewhere in the Contract Documents. A Change Order may be bilateral or unilateral, as described below. Change Orders may be initiated by mutual agreement or through a Contract Change Proposal ("CCP") or Work Directive ("WD").
- B. Change Orders:
1. A Bilateral Change Order is signed by Owner and Contractor to record their agreement on the terms of a change in the Work. A Bilateral Change Order may reflect the agreement of Owner and Contractor on a standalone issue, or it may incorporate one or more mutually agreed upon CCPs or WDs. A Bilateral Change Order shall constitute full payment and final settlement of all claims for time and cost, including direct, indirect, impact and consequential costs, related to the Change Order and Work covered by, affected by and related to the events giving rise to the Change Order.
 2. A Unilateral Change Order is initially signed only by Owner to set forth, subject to the Contract, the terms of a change in the Work based upon one or more CCPs and/or WDs to which the parties have not yet fully agreed. Within 7 Days of its receipt of a Unilateral Change Order, Contractor shall notify Owner in writing either (a) of its acceptance of its terms, in which case the Unilateral Change Order will automatically become a Bilateral Change Order, or (b) of Contractor's rejection, in which case Contractor must submit a written rejection within 14 Days after Contractor delivered written Notice of rejection to Owner as noted above. The written rejection must fully explain the reasons for rejecting the Unilateral Change Order and include all necessary supporting documentation. The rejection will then be considered in accordance with Section 8.02 (Informal Resolution of Disputes). Failure to submit a written Notice of rejection within 7 Days of Contractor's receipt of a Unilateral Change Order or a written rejection within 14 Days shall constitute Contractor's acceptance of the terms of the Unilateral Change Order.

C. Change Orders via Contract Change Proposal:

1. Contractor shall be responsible for maintaining an Issues Log. If Contractor at any time believes that a change in the Work has or may have occurred, Contractor shall add such item to the Issues Log. At a minimum, the Issues Log shall identify:
 - a. Detailed scope of the change in the Work;
 - b. Contract Time impact noting specifically how it impacted the critical path of the project, if any;
 - c. The amount of any anticipated, proposed, or approved change in the Contract Sum;
 - d. Date first included on the Issues Log;
 - e. Owner-initiated or Contractor-initiated; and
 - f. Action status.
2. If the Contractor believes an item on the Issues Log warrants a CCP, Contractor shall provide written Notice to Owner in accordance with Section 8.02, and shall submit a written CCP in accordance with this Section. All CCPs shall be substantiated and submitted within 7 Days of being added to the Issues Log along with a revised progress schedule identifying the time impact affecting the critical path, if any. The CCP shall identify the proposed full compensation for implementing the proposed change in the Work, including any adjustment in the Contract Sum or Contract Time. Upon receipt of the CCP, Owner may accept the proposal and incorporate it into a Bilateral Change Order, reject the proposal and either issue a WD or elect not to proceed with the proposal, request further documentation, or negotiate acceptable terms with Contractor.

D. Work Directives:

1. A WD is a written order prepared by Owner that directs Contractor to perform Work prior to total agreement on an adjustment, if any, in the Contract Sum and/or Contract Time. Owner may direct Contractor, at any time and without invalidating the Contract, through a WD to proceed with a change in the Work or to perform Work that Contractor contends to be a change in the Work, with or without the agreement of Contractor and prior to agreement of the basis for adjustment, if any, to the Contract. Owner's use of a WD does not constitute agreement that the directive constitutes a change in the Work, the Contract Sum or the Contract Time.
2. A WD normally includes:
 - a. The scope of the directed Work,
 - b. Any proposed adjustment to the Contract Sum or not-to-exceed amount,
 - c. Any proposed change to the Contract Time,
 - d. The proposed method of determining any change in the Contract Sum and/or Contract Time, and

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

- e. The supporting data that Contractor must submit in accordance with the requirements of Part 7 of the General Conditions.
- 3. Upon receipt of a WD, Contractor shall promptly commence and proceed diligently with performance of the directed Work. Within 7 Days of its receipt of a WD, Contractor shall notify Owner in writing either (a) of its acceptance of its terms, in which case the terms will become effective, and the WD will be incorporated into a Bilateral Change Order, or (b) of Contractor's rejection of the terms, in which case Contractor must submit a written rejection within 14 Days after Contractor delivered written Notice to Owner as noted above. The written rejection must fully explain the reasons for rejecting the WD and include all necessary supporting documentation. The rejection will then be considered in accordance with Section 8.02. Contractor's rejection of a WD shall not relieve Contractor of its obligation to comply promptly with the WD.
- E. Contractor fault or negligence alleged as basis for change in Contract Sum: No change in the Contract Sum shall be allowed to the extent Contractor's changed cost of performance is due to the fault or negligence of Contractor or anyone for whose acts Contractor is responsible; or to the extent Contractor is responsible for change concurrently caused by Contractor and Owner; or to the extent the change is caused by an act of Force Majeure as defined in Section 3.05.

7.02 CHANGE IN THE CONTRACT SUM

A. General Application

- 1. Contract Sum changes only by Change Order: The Contract Sum shall only be changed by a Change Order.
- 2. Allowances: Any Allowances stated in the Contract Documents shall be included in the Contract Sum. Items covered by Allowances shall be supplied for such amounts and by such persons or entities as Owner may direct, but Contractor shall not be required to employ persons or entities to whom Contractor has made reasonable and timely objection. Owner shall select materials and equipment under an Allowance with reasonable promptness. Allowances shall cover the net cost to Contractor of materials and equipment delivered and/or installed at the site, as identified in the Allowance, and all required taxes, less applicable trade discounts. Whenever actual costs are more than or less than Allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect the difference between actual, reasonable costs and the Allowances.
- 3. Pricing Components: Contractor shall maintain and submit a complete itemization of the costs incurred as a result of any change in the Work, including labor, material, Subcontractor costs, and fee. The total cost of any change in the Work or of any other increase or decrease in the Contract Sum, including a Claim, shall be limited to the actual, reasonable amounts for the following components, itemized in the manner set forth below and submitted on breakdown sheets in a form approved by Owner. If the total cost of the change in the Work does not exceed \$5,000.00, Contractor shall not be required to submit a breakdown if the description of the change in the Work is sufficiently definitive for Owner to determine fair value.
 - a. Labor costs: The labor cost component is determined by multiplying the estimated or actual additional number of hours needed to perform the change in the Work by the fully burdened hourly labor costs. The fully burdened hourly costs shall include the following:

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

- (1) Basic wages and benefits: Hourly rates and benefits as stated on the Department of Labor and Industries approved "Statement of Intent to Pay Prevailing Wages" shall be applicable unless a high, documented amount is actually paid by a contractor for the laborers, apprentices, journeymen, foremen, and other staff performing and/or directly supervising the change in the Work at the site. Any amount in excess of approved "Statement of Intent to Pay Prevailing Wages" shall be substantiated and subject to audit.
 - (2) Worker's insurance: Direct contributions to the State of Washington for industrial insurance; medical aid; and supplemental pension, by the class and rates established by the Department of Labor and Industries.
 - (3) Federal insurance: Direct contributions required by the Federal Insurance Compensation Act; Federal Unemployment Tax Act; and the State Unemployment Compensation Act.
 - (4) Supervision: The labor cost component may include the actual, demonstrated additional supervision hours (not already compensated by Owner) directly related to a change in the Work.
 - (5) Travel and Per Diem allowance: Travel allowance and/or subsistence, if applicable, required by regional labor union agreements, which are itemized and identified separately.
- b. Material costs: The material cost component must be itemized and include material invoices or reasonable lump-sum estimates of the quantity and cost of additional materials needed to perform the change in the Work. Material costs shall be developed first from actual known costs; second from supplier quotations; and, if neither of these is available, then from standard industry pricing guides acceptable to Owner. Material costs shall consider all available discounts. Freight costs, express charges, or special delivery charges shall be itemized.
- c. Equipment costs: The equipment cost component must be itemized by the type of equipment and include the estimated or actual length of time the construction equipment appropriate for the Work is or will be used on the change in the Work on site. Costs will be allowed for construction equipment only to the extent used solely for the changed Work, or for additional rental costs actually incurred by Contractor solely for the changed Work. Equipment charges shall be computed on the basis of actual invoice costs or, if owned, from the current edition of the Associated General Contractors Washington State Department of Transportation (AGC WSDOT) Equipment Rental Agreement current edition as of the Contract execution date. The EquipmentWatch Rental Rate Blue Book shall be used as a basis for establishing rental rates of equipment not listed in the above source. The maximum rate for standby equipment shall not exceed that shown in the AGC WSDOT Equipment Rental Agreement. The rate for Contractor-owned equipment necessarily standing by for future use on the changed Work shall be no more than 50% of the rate established above unless otherwise approved by Owner. The total rental cost shall not exceed the cost of purchasing the equipment outright.
- d. Subcontractor costs: The Subcontractor cost component consists of payments Contractor makes to Subcontractors for the cost of changed Work performed by

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

Subcontractors. Subcontractors' costs shall be calculated and itemized in the same manner as prescribed herein for Contractor.

- e. Fee: The Fee component is compensation for all items and costs not listed in subparagraphs a through d above, and is added to the total cost to Owner of the sum of these items. The Fee shall compensate Contractor, Subcontractor and suppliers for, among other things, combined overhead, profit and other costs, including all office, home office and site overhead, employee per diem, subsistence and travel costs not separately reimbursable under subparagraph a above, warranty, safety costs, printing and copying, quality control/assurance, purchasing, small or hand tool (a tool that costs \$250 or less and is normally furnished by the performing contractor) or expendable charges, temporary construction facilities, field engineering, schedule updating, Project Record, home office cost, taxes (including all taxes except B&O tax and Washington State sales tax payable based on the amount of the approved Application for Payment), office engineering, estimating costs, additional overhead because of extended time, Claim and change preparation, direct and indirect delay, acceleration or impact, and any other cost incidental to the change in the Work. The Fee shall be strictly limited in all cases to the rates below.
- (1). Contractor markup on Contractor Work: Contractor is allowed a Fee for any Work actually performed by Contractor's own forces of 16% of the first \$50,000 of the cost of such Work and 4% of the remaining cost, if any.
 - (2). Subcontractor markup for Subcontractor Work: Each Subcontractor (including lower-tier Subcontractors) is allowed a Fee for any Work actually performed by its own forces of 16% of the first \$50,000 of the cost of such Work and 4% of the remaining cost, if any.
 - (3). Contractor markup for Subcontractor Work: Contractor is allowed a Fee for any Work performed by its Subcontractor(s) of 6% of the first \$50,000 of the amount due each Subcontractor for such Work and 4% of the remaining amount, if any.
 - (4). Subcontractor markup for lower-tier Subcontractor Work: Each Subcontractor is allowed a Fee for any Work performed by its Subcontractor(s) of any lower-tier of 4% of the first \$50,000 of the amount due the lower-tier Subcontractor for such Work and 2% of the remaining amount, if any.
 - (5). Basis of cost applicable for markup: The cost of the Work to which the Fee is to be applied shall be based on the cost components in subparagraphs 7.02.A 3.a – d.
 - (6). Application of Fee: The Fee shall not be included on deductive changes in the Work. Where a change in the Work involves additive and deductive work by Contractor or the same Subcontractor, the Fee as well as bond and insurance markups will apply to the net difference.
- f. Insurance and bond premiums: The cost of any change in insurance or bond premium is added to the sum of the cost components in subparagraphs 7.02.A 3.a – e and is limited to the following:

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

- (1) Contractor's liability insurance: The cost of any changes in Contractor's contractually required liability insurance arising directly from the Change Order; and
- (2) Payment and Performance Bond: The cost of any additional premium for Contractor's contractually required bond arising directly from the Change Order.
- g. Tax: Washington State sales tax and B&O tax arising directly from the Change Order shall be added to the cost of the Change Order.
- h. Unit Prices: If Unit Prices, including pre-agreed rates for material quantities, are applicable to a change in the Work, the Unit Prices shall be applied to the quantities of the items involved as determined in Section 7.02A. Quantities must be supported by field measurement statements signed by Owner. Owner shall be afforded access and be permitted to measure quantities. Contractor shall not exceed any cost limit(s) without Owner's prior written approval. Unit Prices shall include reimbursement for all direct and indirect costs of the Work, but exclude Fee (7.02 A.e), bond, and insurance costs (7.02 A.f).s.

7.03 CHANGE IN THE CONTRACT TIME

- A. Changes in Contract Time: The Contract Time shall only be changed by a Change Order.
- B. Time extension permitted only if delay is not Contractor's fault: If Contractor is delayed at any time in the commencement or progress of the Work (1) by an act or neglect of Owner or anyone for whose acts Owner is responsible; or (2) by changes ordered by Owner in the Work; or (3) by Force Majeure; or (4) by delay authorized by Owner pending dispute resolution; or (5) by other causes that Owner determines may justify delay, then Contractor shall reasonably attempt to mitigate the delay, and the Contract Time shall be extended by Change Order for such reasonable time as Owner may reasonably determine consistent with the provisions of the Contract Documents. No adjustment in the Contract Time shall be allowed to the extent Contractor's changed time of performance is due to the fault or negligence of Contractor or anyone for whose acts Contractor is responsible.
- C. Contractor must demonstrate impact on critical path of schedule: Any change in the Contract Time covered by a Change Order or Claim shall be limited to the change in the critical path of the Work attributable to the change or event(s) giving rise to the Change Order or Claim. Contractor shall be responsible for showing clearly on the Progress Schedule that the change or event had a specific impact on the critical path and, except in case of concurrent delay, was the sole cause of such impact, and could not have been avoided by resequencing of the Work or other reasonable alternatives in accordance with Section 01 32 13 Project Schedule.
- D. Cost arising from change in Contract Time: Contractor is entitled to compensation for the cost of a change in Contract Time only if all the following conditions are met:
 - 1. Must be solely fault of Owner: The change in Contract Time must solely be caused by the fault or negligence of Owner or others for whom Owner is responsible;
 - 2. Procedures: Contractor must follow the procedure set forth in Section 7.03B and Section 8.02;
 - 3. Demonstrate impact on critical path: Contractor must establish the extent of the change in Contract Time in accordance with Section 7.03C and Section 01 32 13 Project

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

Schedule. Owner is not obligated directly or indirectly for damages or an increase in the Contract Sum for any delay suffered by a Subcontractor that does not increase the Contract Time; and

4. Cost measured exclusively by the pricing components of Section 7.02A.3: If Contractor or a Subcontractor of any tier is entitled to compensation arising from or related to a change in Contract Time, the pricing components of Section 7.02A.3 shall exclusively be used to measure the actual costs incurred as a result of the change in Contract Time. Neither Contractor nor a Subcontractor of any tier is entitled to payment for costs arising out of actual or alleged loss of efficiency; morale, fatigue, attitude, or labor rhythm; home office overhead; expectant underrun; trade stacking; reassignment of workers; rescheduling of work; concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended overhead; profit upon damages for delay; impact damages, including cumulative impact; or similar damages.

PART 8 - CLAIMS AND DISPUTE RESOLUTION

8.01 CLAIMS

- A. Definition: A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of the Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract Documents. The term "Claim" also includes other disputes and matters in question between Owner and Contractor arising out of or relating to the Contract Documents. Claims must be initiated in writing and be made in accordance with the Contract Documents. Neither a CCP, a Request for Information, a Bilateral or Unilateral Change Order, a reservation of rights, minutes of a meeting, a daily report, or a log entry shall constitute a Claim or Notice of a Claim. However, Owner and Contractor may agree in a signed writing to supplement how Contractor can provide a Notice of Claim as specified in this Part 8.
- B. Continuing Contract performance: Pending final resolution of a Claim, including the dispute resolution process in Part 8, and except as otherwise agreed in writing or in the Contract Documents, Contractor shall proceed diligently with performance of the Work and maintain the Progress Schedule, and Owner shall continue to make payments of undisputed amounts in accordance with the Contract Documents.
- C. Claims for additional cost: If Contractor wishes to make a Claim for an increase in the Contract Sum, written Notice as provided herein shall be given before proceeding to execute the Work, and written Notice and a written Claim must be made in accordance with this Part 8, or it will be waived.
- D. Claims for additional time: If Contractor wishes to make a Claim for an increase in the Contract Time, written Notice as provided herein shall be given, and a written Claim must be made in accordance with this Part 8, or it will be waived.
- E. Claims for consequential damages: Contractor and Owner waive certain Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes damages incurred by Owner for profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and damages incurred by Contractor for principal and home office overhead and expenses including but not limited to the compensation of personnel stationed there, for loss of financing, business and/or reputation, for losses on other projects, for loss of profit, and for interest or financing costs. This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination. Nothing contained in this subparagraph E, however, shall be deemed to preclude an

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

award of liquidated or other delay damages, when applicable, in accordance with the Contract Documents, or to preclude or limit Contractor's obligation to procure and maintain the insurance policies required by this Contract or indemnify Owner for damages, including direct, indirect or consequential damages, alleged by a third party.

8.02 INFORMAL RESOLUTION OF DISPUTES

- A. Procedure to reduce disputes: In an effort to reduce the incidence and cost to all parties of extended disputes, all disputes, direct or indirect, arising out of or relating to the Contract Documents or the breach thereof, except those that have been waived under the terms of the Contract Documents, shall be decided exclusively by the dispute resolution procedure of Part 8 unless the parties mutually agree in writing otherwise. To the extent that Owner and Contractor agree to a partnering or dispute review process to help address disputes, these processes shall be in addition to, and not in place of, the mandatory contractual dispute resolution procedures.
- B. Notice: Except for disputes requiring Notice before proceeding with the affected Work as otherwise described in the Contract Documents, Contractor shall submit a written Notice of any Claim to Owner's Project Manager, consistent with the requirements of the Contract Documents, within 7 Days of the occurrence of the event giving rise to a dispute. If Contractor did not have actual knowledge of such an event, the written Notice shall be submitted within 7 Days of the date that Contractor reasonably should have been aware of the event. The Notice shall set forth, at a minimum, a description of the event(s) leading to or causing the dispute, the nature of the impacts to Contractor and its Subcontractors, if any, and an estimate of any claimed adjustments in the Contract Sum and/or Contract Time. Without waiving any rights, Owner and Contractor may discuss and attempt to resolve a dispute identified in a Notice of Claim directly with each other or with a third-party neutral or dispute review board if utilized on a Project.
- C. Substantiation: If an issue remains unresolved, Contractor shall submit timely written substantiation to support Contractor's position relating to the Notice of Claim. Such substantiation, which shall include an explanation of Contractor's position and any supporting documentation, shall be provided within 30 Days of submitting a Notice. Contractor may delay submitting data by an additional 14 Days if it notifies Owner that substantial data must be assembled.
- D. Owner's Project Manager to make initial decision on all disputes: After Contractor has submitted written substantiation to Owner that complies with all applicable provisions of Parts 7 and 8, as well as Section 01 32 13, Project Schedule, Owner's Project Manager will endeavor to respond, in writing, to Contractor within 7 Days of the date substantiation is received, or with Notice to Contractor of the date by which Owner's Project Manager expects to render a decision. If necessary to fully and fairly evaluate an issue, the Project Manager may request additional information or extend the time in which to respond. If the issue is not resolved, or if Project Manager does not respond within the later of 7 Days of the date written substantiation is received or the date specified for rendering a decision, the dispute may be escalated by Contractor to Owner's Assistant Vice President, Facilities Services, Capital as set forth in Section 8.02E below.
- E. Contractor may respond to initial decision: The initial decision of the Project Manager will be final and conclusive unless, within 7 Days of the date Contractor receives the initial decision or the date specified for rendering a decision, Contractor notifies Owner's Project Manager in writing of Contractor's disagreement with the initial decision, in which case Contractor must then submit a written rejection to Owner's Assistant Vice President, Facilities Services, Capital within 14 Days. The written rejection must attach the submitted Notice and substantiation and fully explain the reasons for Contractor's disagreement with the initial decision. It must also include all applicable supporting documentation. Failure to submit a written rejection to Owner's Assistant Vice

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

President, Facilities Services, Capital within 14 Days shall constitute Contractor's acceptance of the initial decision.

- F. Assistant Vice President, Facilities Services, Capital decision: Following Contractor's full compliance with the procedure above, Owner's Assistant Vice President, Facilities Services, Capital will endeavor to respond in writing to Contractor with a decision within 7 Days of delivery of the Contractor's rejection or with Notice to Contractor of the date by which Owner's Assistant Vice President, Facilities Services, Capital expects to render a decision. If Owner's Assistant Vice President, Facilities Services, Capital does not respond within the later of 7 Days after delivery of the rejection or the date specified to render a decision, the dispute will be deemed denied and Contractor may further escalate the dispute as set forth in Section 8.02G below.
- G. Claim: If Contractor disagrees with the decision of the Assistant Vice President, Facilities Services, Capital, or if no decision is timely received, Contractor shall timely submit a Claim if it wishes to pursue formal dispute resolution or seek additional relief against Owner of any kind. A Claim must be consistent with the Notice, substantiation and rejection previously provided, be submitted to Owner in writing within 14 Days of the date the decision of the Assistant Vice President, Facilities Services, Capital is received by Contractor or due, and comply with Section 8.04. Any claim of a Subcontractor of any tier may be brought only through, and after review by, Contractor. Contractor acknowledges and agrees that no additional documentation from what was submitted to Owner's Assistant Vice President, Facilities Services, Capital (per part 'F' of this section) may be submitted and considered in any subsequent dispute resolution proceeding. Contractor's failure to provide timely information for Owner's consideration during the dispute resolution procedure of Part 8 has a substantial impact upon and prejudices Owner, including but not limited to its inability to fully investigate or verify a Claim, mitigate damages, choose alternative options, adjust the budget, delete or modify the impacted Work, and/or monitor time, cost and quantities.

8.03 FORMAL RESOLUTION OF CLAIMS

- A. Option for direct discussions: At any time following Contractor's initiation of formal dispute resolution, Owner may require that an officer of Contractor and Owner's Assistant Vice President, Facilities Services, Capital (all with authority to settle) meet, confer, and attempt to resolve the Claim. If the Claim is not resolved during such meeting, or if no such meeting is requested, Contractor may bring no litigation against Owner unless Contractor complies with the procedures described in Sections 8.03B and C. This requirement cannot be waived except by an explicit written waiver signed by Owner and Contractor.
- B. Mediation:
1. Mediation required: Claims, disputes, or other matters in controversy arising out of or related to the Contract shall be subject to mediation as a condition precedent to the initiation of binding dispute resolution. This requirement cannot be waived except by an explicit written waiver signed by both Owner and Contractor. Unless Owner and Contractor mutually agree in writing otherwise, all unresolved Claims shall be considered at a single mediation session that shall occur after Substantial Completion and prior to Final Acceptance by Owner.
 2. Mediation procedure: The parties shall endeavor to resolve Claims by mediation. A request for mediation shall be delivered in writing to the other party to the Contract, and the parties shall promptly attempt to mutually agree on a mediator. If the parties do not agree on a mediator within 30 Days of a party's demand, the mediation, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

on the date of the Agreement. Mediation shall proceed in advance of binding dispute resolution proceedings.

3. Mediation fee to be shared: The parties to the mediation shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction.
 4. Representatives with authority must attend mediation: Representatives of Contractor and Owner must attend the mediation session in person with authority to settle the Claim. To the extent there are other parties in interest, such as A/E, insurers or Subcontractors, their representatives, also with authority to settle the Claim, shall also attend the mediation session in person.
- C. Litigation: Contractor may bring no litigation on a Claim unless the Claim has been raised and considered in accordance with the procedures of this Part 8, including mandatory mediation. Contractor shall have the burden to demonstrate in any litigation that it has complied with all requirements of this Part 8. All unresolved Claims of Contractor shall be waived and released unless Contractor has complied with the time limits of the Contract Documents, and litigation is served and filed within 180 Days after the Date of Substantial Completion approved in writing by Owner. This requirement cannot be waived except by an explicit, written waiver signed by Owner and Contractor. The pendency of a mediation, which shall mean the time period between a party's receipt of a written mediation demand and the date of the initial mediation session, shall stay this deadline for serving and filing a lawsuit. The deadline may also be stayed for an additional period by agreement of the parties or court order. Neither Contractor nor a Subcontractor, whether claiming under a bond or lien statute or otherwise, shall be entitled to attorneys' fees directly or indirectly from Owner (but may recover attorneys' fees from the bond or statutory retainage fund itself to the extent allowable under law).

8.04 CLAIMS PROCESS

- A. Notice and Claims: Any Notice and any Claim of Contractor, whether under the Contract or otherwise, must be made pursuant to and in strict accordance with the applicable provisions of the Contract Documents. No act, omission, or knowledge, actual or constructive, of Owner or anyone for whose acts Owner is responsible shall in any way be deemed to be a waiver of the requirement for timely written Notice and a timely written Claim unless Owner and Contractor sign an explicit, unequivocal written waiver. The fact that Owner and Contractor may consider, discuss, or negotiate a Claim that has or may have been procedurally or substantively defective or untimely under the Contract shall not constitute a waiver of the provisions of the Contract Documents unless Owner and Contractor sign an explicit, unequivocal written waiver. Contractor acknowledges and agrees that Contractor's failure to timely submit required Notices and/or timely submit Claims has a substantial impact upon and prejudices Owner, including but not limited to its inability to fully investigate or verify the Claim, mitigate damages, choose alternative options, adjust the budget, delete or modify the impacted Work, and/or monitor time, cost and quantities.
- B. Claim must cover all costs and be documented: A Claim shall be deemed to cover all changes in cost and time (including direct, indirect, impact, and consequential) to which Contractor (and Subcontractors) may be entitled and may not contain reservations of rights without Owner's written approval; any such unapproved reservations of rights shall be without effect. Any requests by Contractor for an adjustment in both the Contract Sum and Contract Time that arise out of the same event(s) shall be submitted together. A Claim must be fully substantiated and documented. At a minimum, a Claim shall contain the following information:

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

1. Factual statement of Claim: A detailed factual statement of the Claim for additional compensation and/or time, if any, providing all necessary dates, locations, and items of Work affected by the Claim, that confirms not only that Contractor suffered the damages claimed, but that the damages claimed were actually a result of the act, event, or condition complained of;
 2. Dates: The date on which event(s) arose which gave rise to the Claim;
 3. Owner and A/E employee's knowledgeable about Claim: The name of each employee of Owner and/or A/E believed to be knowledgeable about the Claim;
 4. Support from Contract Documents: The specific provisions of the Contract Documents that support the Claim;
 5. Identification of other supporting information: The identification of any documents and the substance of any oral communications that support the Claim;
 6. Copies of supporting documentation: Data and copies of any identified documents, other than the Contract Documents, that support the Claim, including without limitation a complete explanation as to why the relief sought is not within the scope of the Contract Documents;
 7. Details on Claim for Contract Time: If an adjustment in the Contract Time is sought, the specific days and dates for which it is sought; the specific reasons Contractor believes an extension in the Contract Time should be granted, and Contractor's analysis of its Progress Schedule to demonstrate the reason for the extension in Contract Time showing cause and analysis of the resultant delay to the critical path and other information required by the Contract Documents and Section 01 32 13, Project Schedule;
 8. Details on Claim for adjustment of Contract Sum: If an adjustment in the Contract Sum is sought, the exact amount sought and a breakdown of that amount into the categories and with the detail required by Section 7.02; and
 9. Statement certifying Claim: A statement certifying, under penalty of perjury, that the Claim is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor's knowledge and belief, that the Claim is fully supported by the accompanying data, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes Owner is responsible.
- C. False Claims: Contractor shall not make any negligent or fraudulent misrepresentations, concealments, errors, omissions, or inducements to Owner in the formation or performance of this Contract. If Contractor or a Subcontractor submits false or frivolous substantiation or a Claim to Owner, which for purposes of this Section 8.01C is defined as substantiation or a Claim based in whole or in part upon a materially incorrect fact, statement, representation, assertion, or record, Owner shall be entitled to collect from Contractor by offset or otherwise (without prejudice to any right or remedy of Owner) any and all costs and expenses, including investigation and consultant costs, incurred by Owner in investigating, responding to, and defending against such false or frivolous substantiation or Claim.
- D. Notification of surety: Owner may, but is not obligated to, notify Contractor's surety, if any, of the nature and amount of any claim it may assert against Contractor. If the claim relates to a possibility of Contractor's default, Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

- E. Liens: If a Claim relates to or is the subject of a lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice and filing deadlines.
- F. All Claims must be submitted for final resolution within the time period specified by applicable law: Owner and Contractor shall commence all Claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of this Part 8 and within the time period specified by applicable law.
- G. Waiver of rights: Any Claim of Contractor against Owner shall be conclusively deemed to have been waived by Contractor unless made in accordance with the requirements of Part 8.
- H. Owner may investigate: To assist in the review of a Claim, Owner may at any time visit the Project site, communicate directly with Subcontractors, or request additional information (including requesting an audit as authorized below) in order to fully evaluate the issues raised by the Claim.
- I. Owner may audit Claims: All Claims filed against Owner shall be subject to audit at any time following the filing of the Claim. Failure of Contractor or Subcontractors of any tier to permit Owner access to the books and records of Contractor or Subcontractors of any tier, or to maintain and retain sufficient records to allow Owner to verify all or a portion of the Claim, shall constitute a waiver of the Claim and shall bar any recovery.
- J. Contractor to make documents promptly available: In support of Owner's audit of any Claim, Contractor and any Subcontractor shall, upon request, promptly make available to Owner within seven Days of Owner's request, at the office of Contractor or any requested Subcontractor during normal business hours, at least the following documents and other documents requested by Owner; failure to fully comply with this requirement shall constitute a material breach of contract and waiver of any Claim:
1. Daily time sheets and supervisor's daily reports;
 2. Collective bargaining agreements;
 3. Insurance, welfare, and benefits records;
 4. Payroll registers;
 5. Earnings records;
 6. Payroll tax forms;
 7. Material invoices, requisitions, and delivery confirmations;
 8. Material cost distribution worksheet;
 9. Equipment records (list of company equipment, rates, etc.);
 10. Vendors', rental agencies', Subcontractors', and agents' invoices;
 11. Contracts between Contractor and each of its Subcontractors, and all lower-tier Subcontractor contracts and supplier contracts;
 12. Subcontractors' and agents' payment certificates;

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

13. Cancelled checks (payroll and vendors);
 14. Job cost reports, including job cost summary and job cost detail reports, related labor and equipment reports, and monthly totals;
 15. Job payroll ledger;
 16. Planned resource loading schedules and summaries;
 17. General ledger;
 18. Cash disbursements journal;
 19. Financial statements for all years during performance of the Work. In addition, Owner may require, if it deems it appropriate, additional financial statements for 3 years preceding execution of the Work;
 20. Depreciation records on all company equipment whether these records are maintained by the company involved, its accountant, or others;
 21. If a source other than depreciation records is used to develop costs for Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents;
 22. All non-privileged documents which relate to each and every Claim together with all documents which support the amount of any adjustment in the Contract Sum or Contract Time sought by each Claim;
 23. Work sheets or software used to prepare and establish the cost components for items of the Claim, including but not limited to labor, benefits and insurance, materials, equipment, Subcontractors, all documents that establish the time periods, individuals involved, the hours for the individuals, and the rates for the individuals;
 24. Work sheets, software, and all other documents used by Contractor to prepare its bid;
 25. The above items for its Subcontractors; and
 26. Any other information in any form or media not expressly protected from discovery by applicable law.
- K. Contractor to cooperate and provide facilities for audit: The audit may be performed by employees or representatives of Owner. Contractor and its Subcontractors shall provide adequate facilities acceptable to Owner for the audit during normal business hours. Contractor and all Subcontractors shall make a good faith effort to cooperate with Owner's auditors.
- L. Reciprocal RCW 42.56 rights: Contractor agrees, on behalf of itself and Subcontractors, that any invocation of RCW 42.56 at any time by Contractor or a Subcontractor, or their respective representatives, shall initiate an equivalent right to disclosures from Contractor and Subcontractors for the benefit of Owner. Failure to fully comply with these requirements shall constitute a material breach of the Contract and shall constitute a waiver of all Claims by Contractor and any Subcontractor that does not fully comply.

PART 9 - TERMINATION OF THE WORK

9.01 TERMINATION BY OWNER FOR CAUSE

- A. 7 Day Notice to Terminate for Cause: Owner may, upon 7 Days written notice to Contractor and to its surety, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for cause upon the occurrence of any one or more of the following events:
1. Contractor fails to prosecute Work: Contractor fails to prosecute the Work or any portion thereof with sufficient diligence to ensure Substantial Completion of the Work within the Contract Time;
 2. Contractor bankrupt: Contractor is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency;
 3. Contractor fails to correct Work: Contractor fails in a material way to replace or correct Work not in conformance with the Contract Documents;
 4. Contractor fails to supply workers or materials: Contractor repeatedly fails to supply skilled workers or proper materials or equipment;
 5. Contractor failure to pay Subcontractors or labor: Contractor repeatedly fails to make prompt payment due to Subcontractors or for labor;
 6. Contractor violates laws: Contractor materially disregards or fails to comply with laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction; or
 7. Contractor in material breach of Contract: Contractor is otherwise in material breach of any provision of the Contract Documents.
- B. Owner's actions upon termination: Upon termination, Owner may at its option:
1. Take possession of Project site: Take possession of the Project site and take possession of or use all materials, equipment, tools, and construction equipment and machinery thereon owned by Contractor to maintain the orderly progress of, and to finish, the Work;
 2. Accept assignment of Subcontracts: Accept assignment of subcontracts pursuant to Section 5.20; and
 3. Finish the Work: Finish the Work by whatever other reasonable method it deems expedient.
- C. Surety's role: Owner's rights and duties upon termination are subject to the prior rights and duties of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.
- D. Contractor's required actions: When Owner terminates the Work in accordance with this section, Contractor shall take the actions set forth in paragraph 9.02B, and shall not be entitled to receive further payment until the Work is accepted.
- E. Contractor to pay for unfinished Work: Contractor shall not be entitled to receive further payment until the Work is finished. If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for A/E's services and expenses made necessary thereby and any other extra costs or damages incurred by Owner in completing the Work, or as a result of

GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS

Contractor's actions, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to Owner. These obligations for payment shall survive termination.

- F. Contractor and Surety still responsible for Work performed: Termination of the Work in accordance with this section shall not relieve Contractor or its surety of any responsibilities for Work performed.
- G. Conversion of "Termination for Cause" to "Termination for Convenience": If Owner terminates Contractor for cause and it is later determined that none of the circumstances set forth in paragraph 9.01A exist, then such termination shall be deemed a termination for convenience pursuant to Section 9.02.

9.02 TERMINATION BY OWNER FOR CONVENIENCE

- A. Owner Notice of Termination for Convenience: Owner may, upon written notice, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for the convenience of Owner.
- B. Contractor response to termination Notice: Unless Owner directs otherwise, after receipt of a written notice of termination for either cause or convenience, Contractor shall promptly:
1. Cease Work: Stop performing Work on the date and as specified in the notice of termination;
 2. No further orders or Subcontracts: Place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of such portion of the Work as is not terminated;
 3. Cancel orders and Subcontracts: Cancel all orders and subcontracts, upon terms acceptable to Owner, to the extent that they relate to the performance of Work terminated;
 4. Assign orders and Subcontracts to Owner: Assign to Owner all of the right, title, and interest of Contractor in all orders and subcontracts;
 5. Take action to protect the Work: Take such action as may be necessary or as directed by Owner to preserve and protect the Work, Project site, and any other property related to this Project in the possession of Contractor in which Owner has an interest; and
 6. Continue performance not terminated: Continue performance only to the extent not terminated.
- C. Terms of adjustment in Contract Sum if Contract terminated: If Owner terminates the Work or any portion thereof for convenience, Contractor shall be entitled to make a request for an equitable adjustment for its reasonable direct costs incurred prior to the effective date of the termination, plus reasonable allowance for overhead and profit on Work performed prior to termination, plus the reasonable administrative costs of the termination, but shall not be entitled to any other costs or damages, whatsoever, provided however, the total sum payable upon termination shall not exceed the Contract Sum reduced by prior payments. Contractor shall be required to make its request in accordance with the provisions of Part 7.
- D. Owner to determine whether to adjust Contract Time: If Owner terminates the Work or any portion thereof for convenience, the Contract Time shall be adjusted as determined by Owner.

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

9.03 TERMINATION BY CONTRACTOR FOR CAUSE

- A. Contractor termination: Except as provided by RCW 60.28.080, Contractor may terminate the Contract for any of the following reasons:
1. Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped permanently;
 2. An act of government, such as a declaration of national emergency, that requires all Work to be stopped permanently;
 3. Because Owner has improperly not made payment of undisputed amounts within the time stated in the Contract Documents; or
 4. The Work is stopped for a period of 60 consecutive Days through no act or fault of Contractor, a Subcontractor, or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with Contractor,
- B. Contractor termination procedure: If one of these reasons exists, Contractor may, upon seven Days' written Notice to Owner (during which period Owner has the opportunity to cure), terminate the Contract and recover from Owner payment for Work executed in accordance with the Contract Documents, including reasonable overhead and profit on Work executed and costs incurred by reason of such termination. The total recovery of Contractor shall not exceed the unpaid balance of the Contract Sum.

PART 10 - MISCELLANEOUS PROVISIONS

10.01 GOVERNING LAW

Applicable law and venue: The Contract Documents and the rights of the parties herein shall be governed by the internal laws of the state of Washington, without regard to its choice-of-law provisions. Venue shall be in the county in which the Project is located, unless otherwise specified.

10.02 SUCCESSORS AND ASSIGNS

Bound to successors; Assignment of Contract: Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to the partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party shall assign the Contract without written consent of the other, except that Contractor may assign the Work for security purposes to a bank or lending institution authorized to do business in the state of Washington. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations set forth in the Contract Documents. If a majority of the ownership or the control of Contractor is acquired by a third party, and such acquisition reasonably imperils performance or creates a conflict of interest that Owner, in its sole discretion, cannot reasonably reconcile, then Owner may terminate this Contract at any time for cause under Section 9.01.

10.03 MEANING OF WORDS

Meaning of words used in Contract Documents: Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Reference to standard Specifications, manuals, or codes of any technical society, organization, or association, or to the code of any governmental authority, whether such reference is specific or by implication, shall be to the latest

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

standard specification, manual, or code in effect on the date for submission of bids, except as may be otherwise specifically stated. Wherever in the Drawings and Specifications an article, device, or piece of equipment is referred to in the singular manner, such reference shall apply to as many such items as are shown on the Drawings, or required to complete the installation.

10.04 RIGHTS AND REMEDIES

- A. No waiver of rights: Waiver of any provisions of the Contract Documents must be in writing and authorized by Owner. No other waiver is valid on behalf of Owner. No action, delay in acting, or failure to act by Owner or A/E shall constitute a waiver of a right or duty afforded under the Contract Documents, nor shall action, delay in acting, or failure to act constitute approval or an acquiescence in a breach therein, or otherwise prejudice the right of Owner to enforce a right or remedy at any subsequent time, except as may be specifically agreed in writing.
- B. Rights under Contract do not limit other rights: Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.
- C. If portion of Contract is void, remainder is enforceable: If any portion of this Contract is held to be void or unenforceable, the remainder of the Contract shall be enforceable without such portion.

10.05 CONTRACTOR REGISTRATION AND COMPLIANCE

- A. Contractor must be registered and licensed: Pursuant to RCW 39.06, Contractor shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27. Contractor shall also have a current state unified business identifier number; have industrial insurance coverage for Contractor's employees working in Washington as required in Title 51 RCW; have an employment security department number as required in Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW; and not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).
- B. Employer contributions: Pursuant to RCW 50.24, "Contributions by Employers," in general and RCW 50.24.130 in particular, Contractor shall pay contributions for wages for personal services performed under this Contract or arrange for a bond acceptable to the Commissioner.
- C. Apprenticeship requirements: If the Contract Sum for the Project exceeds one million dollars, Contractor shall comply with all applicable apprenticeship requirements.

10.06 TIME COMPUTATIONS

Computing time: When computing any period of time, the day of the event from which the period of time begins shall not be counted. The last day is counted unless it falls on a weekend or legal holiday, in which event the period runs until the end of the next day that is not a weekend or holiday. When the period of time allowed is less than 7 days, intermediate Saturdays, Sundays, and legal holidays are excluded from the computation.

10.07 RECORDS RETENTION

Six year records retention period: The wage, payroll, and cost records of Contractor, and its Subcontractors, and all records subject to audit in accordance with Section 8.03, shall be retained for a period of not less than 6 years after the date of Final Acceptance.

**GENERAL CONDITIONS
FOR WASHINGTON STATE FACILITY CONSTRUCTION
WITH WASHINGTON STATE UNIVERSITY AMENDMENTS**

10.08 THIRD-PARTY AGREEMENTS

No third party relationships created: The Contract Documents shall not be construed to create a contractual relationship of any kind between: A/E and Contractor; Owner and any Subcontractor; or any persons other than Owner and Contractor.

10.09 ANTITRUST ASSIGNMENT

Contractor assigns overcharge amounts to Owner: Owner and Contractor recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, Contractor hereby assigns to Owner any and all claims for such overcharges as to goods, materials, and equipment purchased in connection with the Work performed in accordance with the Contract Documents, except as to overcharges which result from antitrust violations commencing after the Contract Sum is established and which are not passed on to Owner under a Change Order. Contractor shall put a similar clause in its Subcontracts, and require a similar clause in its sub-Subcontracts, such that all claims for such overcharges on the Work are passed to Owner by Contractor.

10.10 HEADINGS AND CAPTIONS

Headings for convenience only: All headings and captions used in these General Conditions are only for convenience of reference, and shall not be used in any way in connection with the meaning, effect, interpretation, construction, or enforcement of the General Conditions, and do not define the limit or describe the scope or intent of any provision of these General Conditions.

10.11 INDEPENDENT CONTRACTOR

Contractor is independent contractor: Contractor shall be and operate as an independent contractor in the performance of the Work and shall have complete control over and responsibility for all personnel performing the Work. Contractor is not authorized to enter into any agreements or undertakings for or on behalf of Owner or to act as or be an agent or employee of Owner.

10.12 OWNER'S ROLE

Owner's role is limited. Owner will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely Contractor's responsibility under the Contract Documents. The presence of Owner at the Project site shall not in any manner be construed as assurance that the Work is being completed in compliance with the Contract Documents, nor as evidence that any requirement of the Contract Documents of any kind, including Notice, has been met or waived. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Owner will not have control over or charge of and will not be responsible for acts or omissions of Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

END OF SECTION 00 72 00

*Washington State University • Asbestos Management Program****Reasonable Certainty
of Non-Disturbance of Asbestos***

Purpose - For WSU public works projects that are not anticipated to disturb asbestos, this form may be completed and placed in the Contract Documents in-lieu of a good faith asbestos survey.

Instructions - For any WSU public works project, the WSU Project Manager, WSU Project Engineer, Architect, or Project Engineer must complete and sign this form to certify that asbestos disturbance is not expected to occur. Alternatively, an AHERA Asbestos Building Inspector from Environmental Health and Safety (EH&S) can be contacted to certify that asbestos disturbance is not expected to occur if a finalized scope of work is provided to review. If the statements below cannot be certified, an asbestos good faith survey must be completed for the project.

A copy of this form or good faith inspection report must be made available to all bidders on the project and available for inspection on-site during work.

Certification - Check all that apply

☐

1. The project is not anticipated to disturb any building materials.

Note: If the disturbance of building materials is determined to be required during the construction phase, a good faith inspection must be arranged or this form must be revisited prior to disturbance.

☒

2. The project only involves the disturbance of metal, glass, wood, structural concrete (e.g. concrete slabs, columns, foundations) which are not suspected to contain asbestos.

☐

3. The project involves earthwork that is not anticipated to disturb asbestos.

Limitation - buried utilities or waste that contain asbestos may be present in soils on campus. If suspect asbestos materials are encountered in the soil during earthwork activities, stop work and contact the WSU Construction Manager.

I have reviewed the project scope-of-work and certify that to the best of my knowledge, the above conditions are true.

Signature: _____

Cynthia Arbour

Digitally signed by Cynthia Arbour
DN: cn=US, Email=carbour@wsu.edu, o=Washington
State University, ou=Facilities Services Capital,
c=Cynthia Arbour
Location: Pullman WA
Reason: I agree to the terms defined by the
placement of my signature on this document
Date: 2022.07.05 08:08:15-07'00'

Name: Cynthia Arbour

Position: Project Manager

Phone/email 335-7010/carbour@wsu.edu

PART 1 GENERAL

1.01 SUMMARY

- A. Contractor shall perform the entire Work in accordance with the Contract Documents.
- B. Without limiting the requirements of the Contract Documents, the Work of the Contract can be summarized as follows:
 - 1. Install a concrete paved path that alternates between 10 and 12ft wide with 2ft gravel shoulders approximately 1,600 LF from the intersection of SR270 and Bishop Blvd westward to Stadium Way. Install new landscaping and irrigation along path, and pedestrian lights along 400 LF of path.

1.02 SCHEDULE OF ALTERNATES

- A. Without limiting the requirements of the Contract Documents, the Work of the Alternates can be summarized as follows:
 - 1. Install 3" asphalt pavement in lieu of concrete pavement.

1.03 GENERAL INFORMATION

- A. Owner and Owner's Designated Representative:
 - 1. Owner: Board of Regents
Washington State University
Pullman, WA 99164-1045
 - 2. Owner's Designated Representative:
 - a. All Owner capital projects are administered by the Department of Facilities Services, Capital. Project specific designated representatives are listed within the Agreement.
 - 3. Consulting Services: Owner has retained an Architect/Engineer to design the entire Project. The Architect/Engineer is identified below, as are others involved as members of the Owner team working on the Project:
 - a. Architect/Engineer: Keller Associates, Clarkston, WA
 - b. Landscape Architect: Bernardo Wills Architects, Spokane, WA
 - c. Electrical Engineer: Keller Associates, Clarkston, WA

1.04 SPECIAL CONDITIONS

- A. Site Access: Vehicular traffic must be maintained along SR 270, Stadium Way, and Bishop Boulevard for the duration of the project. A traffic plan will be required for approval prior to the start of work.

- B. Schedule and Phasing: No onsite work shall occur until after Commencement 2023 (May 6, 2023).
- C. Owner Occupancy: Alternative paths for pedestrians and bicyclists must be provided for the duration of the project. Vehicular travel must be maintained along Bishop Boulevard, SR 270 and Stadium Way.
- D. Hazardous Material: No hazardous materials are known to exist in the project extents.

END OF SECTION 01 11 00

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes the administrative and procedural requirements for executing changes in the Work. This Section is subject to and governed by the Agreement and General Conditions. In the event of any conflict, the Agreement and General Conditions will have a higher precedence as established in the General Conditions.

1.02 SUBMITTALS

- A. Contractor shall submit a breakdown of its actual wage rates prior to commencement of construction activities. The breakdown must show:
 - 1. Basic wage rate (Based on L&I Intent to Pay Prevailing Wages);
 - 2. Fringe Package (Based on L&I Intent to Pay Prevailing Wages);
 - 3. FUI (Federal Unemployment Insurance);
 - 4. FICA (Federal Insurance Compensation Act);
 - 5. SUI (State Unemployment Compensation Act);
 - 6. Medicare; and
 - 7. WC (Workers Compensation).
- B. Contractor shall submit detailed supporting documentation to verify the above rates, if requested by Owner. All such rates shall be subject to audit.
- C. Contractor shall submit prior to commencement of construction activities a list of all equipment that it anticipates will be used on the Project and the actual operating cost of each piece of equipment. The General Conditions describe allowable equipment charges. All costs shall be subject to audit.

1.03 CONTRACT CHANGE PROPOSAL PROCEDURES

- A. Contractor shall maintain an Issues Log/ CCP Log as described in the General Conditions:
 - 1. The action status shall indicate which party is currently responsible and when it is appropriate to submit a CCP to Owner. Contractor shall submit a Contract Change Proposal (CCP) with Substantiating Documentation, as described in subsection C below, to Owner within 7 Days of this action status change.
 - 2. Upon final agreement and authorization by Owner a CCP may be incorporated into the Contract via Change Order and shall be reflected on the Issues Log.

B. Direction to perform Work:

1. Owner may directly order Work by a written Work Directive (WD). WDs may be unilateral or bilateral as described in the General Conditions and may be issued on a fixed price or on a "cost-not-to-exceed" basis. The WD may include the following:
 - a. A detailed description of the proposed change, products, and location of modification to the Work;
 - b. Supplementary or revised Drawings and/or Specifications; and
 - c. Projected time for making the change and a statement as to whether overtime work is, or is not, acceptable.

C. Substantiating Documentation required with all CCPs:

1. Contractor shall provide back-up documentation required to substantiate any proposed change in the following format:
 - a. CCP narrative, including:
 - 1) Description of proposed change. In order to allow for efficient review of a change proposal Contractor shall provide enough narrative to the line item breakdown to allow Owner to properly assess that the change is fair and reasonable;
 - 2) Cause of or reason for making change with a statement of why proposed change is not covered by Contract Documents
 - 3) Both credited and additive elements relating to a change in Contract Sum and/or Contract Time;
 - 4) A specific period of time during which Contractor's pricing will be considered valid;
 - 5) Any schedule considerations that may trigger further impact to the Contract Time if acceptance of the proposed change is delayed beyond a specific date; and
 - 6) Date change Work is to be completed.
 - b. Owner supplied Change Proposal Submittal Form.
 - c. CCP Cost Estimate Detail Sheet(s), or other form acceptable to Owner, including:
 - 1) Line-item estimate detailing material, labor, equipment, Subcontractor, and supplier costs and quantities; and
 - 2) Subcontractor and supplier proposals with supporting line-item estimates.
 - d. CCP Progress Schedule with Contemporaneous Period Analysis detailing if any impact to the planned progress of the Work and

critical path.

- e. Other supporting documentation, as appropriate.

D. Correlation with Contractor's Submittals:

1. Application for Payment forms shall record each Unilateral and Bilateral Change Order as a separate item of Work.
2. The Progress Schedule shall be revised to reflect changes in the Contract Time.
3. Project Record shall incorporate all changed Work.

END OF SECTION 01 26 00

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes procedures for preparation and submittal of Applications for Payment.

1.02 SUBMITTALS

- A. Prior to submitting its first Application for Payment, Contractor shall:
1. Submit a preliminary Progress Schedule per Section 01 32 13 – Progress Schedule.
 2. If requested, submit a projected monthly cash-flow analysis for the duration of the Project.
 3. Submit an approved Intent to Pay Prevailing Wages form prior to commencing the Work. An approved Intent to Pay Prevailing Wages form must be on file with Owner for each classification of laborers, workers, or mechanics employed by Contractor or Subcontractors whose Work is included in an Application for Payment.
 4. “Washington State Prevailing Wage Rates for Public Works Contracts/Whitman County” are made a part of the Contract Documents and are included at the end of this Section. It is Contractor’s responsibility to verify with the Washington State Department of Labor and Industries the most current and applicable prevailing wage rates for this Project.
 5. Submit and receive approval of the Schedule of Values per Section 01 29 73 – Schedule of Values, and the General Conditions. All Applications for Payment shall be in the same format.
 6. Submit a list of all Subcontractors with points of contact and other contact information, including phone number, email address, and mailing address.
 7. Submit a list of all major material suppliers with points of contact and other contact information, including phone number, email address, and mailing address.
 8. Submit Retainage Option Form to Owner for the disposition of retainage funds.
 - a. In accordance with Chapter 60.28 of the Revised Code of Washington (RCW), Owner shall reserve retainage not to exceed 5% of the monies earned by Contractor as a trust fund for the protection and payment of:
 - 1) The claims of any person and/or Owner arising out of or relating to Work performed on the Project; and
 - 2) The State with respect to taxes, fees, or penalties that may

be imposed and due from Contractor (see General Conditions).

- b. Retainage will be released per Section 01 70 00 - Project Close-Out.
- c. At the option of Contractor, the moneys reserved by Owner shall be:
 - 1) Retained in a fund by Owner;
 - 2) Bonded for all of the retainage using a bond form acceptable to Owner;
 - 3) Placed in escrow with a bank or trust company by Owner.
 - a) Escrow: If the retained funds are to be placed in escrow, Contractor will select the escrow agent, subject to approval by Owner. The selected agent must be a bank or trust company in the State of Washington.
 - b) Escrow Agent: If Contractor elects the escrow option, an escrow agreement shall be executed by Contractor, Owner, and bank or trust company. Three copies of the agreement should be completed and executed by Contractor and returned to Owner for execution; Owner will forward copies to the bank or trust company for receipt, acceptance, and execution. The bank or trust company will retain one copy and return one copy each to Contractor and Owner. A completed and signed escrow agreement must be on file with Owner before Contractor's first Application for Payment is processed.
 - c) Escrow Investments: The bank or trust company may invest the retained funds in bonds and other securities selected by Contractor, except stocks, subject to the written approval of Owner.
 - d) The investments selected must mature on or prior to the date 45 Days following Final Acceptance of the Work. Interest on such investments may be paid to Contractor as it accrues.
 - e) Escrow Costs and Fees: All escrow costs and fees shall be paid by Contractor.
 - f) Release of Escrow Investments to Contractor: Retainage will be released per Section 01 70 00 - Project Close-Out. Once Contractor has fully complied with the Contract Documents and statute, Owner shall issue written instructions to the bank or trust company to release to Contractor the investment held in escrow.

B. Draft Application for Payment:

1. Contractor shall submit a draft, itemized Application for Payment within the last 7 Days of the month.
2. The draft application does not constitute a payment request and shall not be signed.
3. Contractor shall carefully check all extensions, totals, and required information for accuracy before submittal.
4. Contractor and Owner may meet to confer regarding the current progress of the Work and the amount of payment to which Contractor is entitled. Owner may request that Contractor provide supporting documentation substantiating its right to payment. Contractor is not entitled to make a final payment request, nor is any payment due Contractor, until such data is furnished. Contractor may include in its Application for Payment projected costs to the end of the month.
 - a. Fill in the following information within Owner's Application for Payment form:
 - 1) Percentage of Work completed based upon the approved schedule of values.
 - 2) List Change Orders approved by Owner prior to submission date. Use Owner's designations. Do not bill for changed Work until a fully executed Change Order has been received.
 - 3) Certification of Participation WBE and MBEs, all certification types acceptable, supply this regardless of having firms to report upon.
 - 4) List all Subcontractors that have performed Work at the site during the pay period.
 - 5) If applicable, Apprentice/Journeyman Participation.
5. Contractor shall submit or make available for review the following prior to the draft Application for Payment:
 - a. Project Record; (see Section 01 78 39 – Project Record)
 - b. Updated Progress Schedule in native format (see section 01 32 13 – Progress Schedule);
 - c. Contractor Quality Control Reports (see Section 01 45 00 - Quality Control); and
 - d. Stored Materials: Requests for payment of stored materials may only be made for materials properly stored on or off-site and in full compliance with the General Conditions.

C. Application for Payment:

1. Contractor may not submit the approved Application for Payment (or

- payment will be withheld) until all requirements of the draft application for payment are met.
2. Upon approval of the Draft Application for Payment, contractor will be authorized to submit the agreed upon Application for Payment for processing and payment. This application for payment shall be signed by hand by a responsible officer of the Contractor and may be submitted in scanned format electronically.
 3. Formal submittal must include all parts of the Application for Payment form.
 4. Owner shall make progress payments in such amounts as it determines are properly due within 30 Days of receipt of a properly executed Application for Payment.
 5. Owner shall notify Contractor in accordance with Chapter 39.76 RCW if the Application for Payment does not comply with the requirements of the Contract Documents.
- D. Disputed Amounts: If Contractor believes it is entitled to payment for Work performed during the prior calendar month in addition to the agreed-upon amount, Contractor may, also within the same period, submit to Owner along with the approved Application for Payment a separate, written payment request specifying the exact additional amount claimed due, the category in the Schedule of Values in which the payment is claimed due, the specific Work for which the additional amount is due, and why the additional payment is due. Furthermore, for the submittal to be considered, Contractor and all Subcontractors shall file with Owner by the same date certified copies of all payroll records relating to the additional amount due, pursuant to WAC 296-127-320.
- E. Payments to Subcontractors: Contractor shall pay each Subcontractor no later than 10 Days after receipt of payment from Owner the amount to which the Subcontractor is entitled. Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to lower-tier Subcontractors in a similar manner.
1. Applications for Payment shall not request payment for portions of the Work that Contractor does not intend to pay a Subcontractor, unless such Work has been performed by others whom Contractor intends to pay.
 2. If, after making an Application for Payment but before paying a Subcontractor for its performance covered by the Application, Contractor discovers that part or all of the payment otherwise due to the Subcontractor is subject to withholding from the Subcontractor under the Subcontract (such as for unsatisfactory performance or non-payment of lower-tier Subcontractors), Contractor may withhold the amount as allowed under the Subcontract, but it shall:
 - a. Give the Subcontractor and Owner written notice of the withholding as soon as practicable once Contractor determines the cause for the withholding but before the due date of the Subcontractor payment;

- b. Include the reasons for the withholding and the actions the Subcontractor must take to release the payment; and
 - c. Once Subcontractor has taken the required remedial actions, pay Subcontractor within 8 Days.
 - 3. Owner may, at its sole option, issue joint checks to Contractor and to any Subcontractor. If Owner makes payments by joint check, such value shall be reflected on the next Application for Payment.
- F. Application for Final Payment:
 - 1. Application for Final Payment will be accepted for processing only after Contractor has completed the requirements of Final Completion as described in Section 01 70 00 – Project Close-Out.
- G. Release of Retainage:
 - 1. Retainage will be released per Section 01 70 00 - Project Close-Out.

END OF SECTION 01 29 00

State of Washington
Department of Labor & Industries
Prevailing Wage Section - Telephone 360-902-5335
PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker's wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

Journey Level Prevailing Wage Rates for the Effective Date: 11/05/2022

<u>County</u>	<u>Trade</u>	<u>Job Classification</u>	<u>Wage</u>	<u>Holiday</u>	<u>Overtime</u>	<u>Note</u>	<u>*Risk Class</u>
Whitman	Asbestos Abatement Workers	Journey Level	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Boilermakers	Journey Level	\$72.54	<u>5N</u>	<u>1C</u>		View
Whitman	Brick Mason	Journey Level	\$55.44	<u>5A</u>	<u>1M</u>		View
Whitman	Building Service Employees	Janitor	\$14.49		<u>1</u>		View
Whitman	Building Service Employees	Shampooer	\$14.49		<u>1</u>		View
Whitman	Building Service Employees	Waxer	\$14.49		<u>1</u>		View
Whitman	Building Service Employees	Window Cleaner	\$14.49		<u>1</u>		View
Whitman	Cabinet Makers (In Shop)	Journey Level	\$14.49		<u>1</u>		View
Whitman	Carpenters	Acoustical Worker	\$53.36	<u>7E</u>	<u>4X</u>	<u>8N</u>	View
Whitman	Carpenters	Bridge, Dock & Wharf Carpenter	\$57.36	<u>7E</u>	<u>4X</u>	<u>8N</u>	View
Whitman	Carpenters	Floor Layer & Floor Finisher	\$53.36	<u>7E</u>	<u>4X</u>	<u>8N</u>	View
Whitman	Carpenters	Form Builder	\$53.36	<u>7E</u>	<u>4X</u>	<u>8N</u>	View
Whitman	Carpenters	General Carpenter	\$53.36	<u>7E</u>	<u>4X</u>	<u>8N</u>	View
Whitman	Carpenters	Heavy Construction Carpenter	\$57.36	<u>7E</u>	<u>4X</u>	<u>9E</u>	View
Whitman	Carpenters	Scaffold/Shoring Erecting & Dismantling	\$57.36	<u>7E</u>	<u>4X</u>	<u>8N</u>	View
Whitman	Cement Masons	Journey Level	\$52.83	<u>7B</u>	<u>1N</u>		View
Whitman	Divers & Tenders	Assistant Tender	\$61.33	<u>7E</u>	<u>4X</u>		View
Whitman	Divers & Tenders	Bell/Vehicle or Submersible Operator Not Under Pressure	\$64.43	<u>7E</u>	<u>4X</u>		View
Whitman	Divers & Tenders	Dive Supervisors	\$112.37	<u>7E</u>	<u>4X</u>		View
Whitman	Divers & Tenders	Diver	\$110.87	<u>7E</u>	<u>4X</u>	<u>8V</u>	View
Whitman	Divers & Tenders	Diver on Standby	\$63.43	<u>7E</u>	<u>4X</u>		View
Whitman	Divers & Tenders	Diver Tender	\$64.43	<u>7E</u>	<u>4X</u>		View
Whitman	Divers & Tenders	Diving Master	\$74.42	<u>7E</u>	<u>4X</u>		View
Whitman	Divers & Tenders	Manifold Operator	\$64.43	<u>7E</u>	<u>4X</u>		View
Whitman	Divers & Tenders	Manifold Operator Mixed Gas	\$68.43	<u>7E</u>	<u>4X</u>		View
Whitman	Divers & Tenders	Remote Operated Vehicle Operator	\$64.43	<u>7E</u>	<u>4X</u>		View
Whitman	Divers & Tenders	Remote Operated Vehicle	\$61.33	<u>7E</u>	<u>4X</u>		View

		Tender/Technician					
Whitman	Dredge Workers	Assistant Engineer	\$76.56	5D	3F		View
Whitman	Dredge Workers	Assistant Mate (Deckhand)	\$75.97	5D	3F		View
Whitman	Dredge Workers	Boatmen	\$76.56	5D	3F		View
Whitman	Dredge Workers	Engineer Welder	\$78.03	5D	3F		View
Whitman	Dredge Workers	Leverman, Hydraulic	\$79.59	5D	3F		View
Whitman	Dredge Workers	Mates	\$76.56	5D	3F		View
Whitman	Dredge Workers	Oiler	\$75.97	5D	3F		View
Whitman	Drywall Applicator	Journey Level	\$53.36	7E	4X	8N	View
Whitman	Drywall Tapers	Journey Level	\$48.58	7E	1P		View
Whitman	Electrical Fixture Maintenance Workers	Journey Level	\$14.49		1		View
Whitman	Electricians - Inside	Journeyman	\$61.86	7G	1E		View
Whitman	Electricians - Motor Shop	Craftsman	\$15.37		1		View
Whitman	Electricians - Motor Shop	Journey Level	\$14.69		1		View
Whitman	Electricians - Powerline Construction	Cable Splicer	\$88.89	5A	4D		View
Whitman	Electricians - Powerline Construction	Certified Line Welder	\$81.65	5A	4D		View
Whitman	Electricians - Powerline Construction	Groundperson	\$52.91	5A	4D		View
Whitman	Electricians - Powerline Construction	Heavy Line Equipment Operator	\$81.65	5A	4D		View
Whitman	Electricians - Powerline Construction	Journey Level Lineperson	\$81.65	5A	4D		View
Whitman	Electricians - Powerline Construction	Line Equipment Operator	\$70.02	5A	4D		View
Whitman	Electricians - Powerline Construction	Meter Installer	\$52.91	5A	4D	8W	View
Whitman	Electricians - Powerline Construction	Pole Sprayer	\$81.65	5A	4D		View
Whitman	Electricians - Powerline Construction	Powderperson	\$60.75	5A	4D		View
Whitman	Electronic Technicians	Journey Level	\$50.89	5I	1B		View
Whitman	Elevator Constructors	Mechanic	\$103.81	7D	4A		View
Whitman	Elevator Constructors	Mechanic In Charge	\$112.09	7D	4A		View
Whitman	Fabricated Precast Concrete Products	Journey Level	\$14.49		1		View
Whitman	Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	\$14.49		1		View
Whitman	Fence Erectors	Fence Erector	\$47.62	7B	1M	8Z	View
Whitman	Flaggers	Journey Level	\$44.88	7B	1M	8Z	View
Whitman	Glaziers	Journey Level	\$40.20	7L	4L		View
Whitman	Heat & Frost Insulators And Asbestos Workers	Journey Level	\$59.24	5K	1U		View
Whitman	Heating Equipment Mechanics	Journey Level	\$65.36	6Z	1B		View
Whitman	Hod Carriers & Mason Tenders	Journey Level	\$44.89	7B	1M	8Z	View
Whitman	Industrial Power Vacuum Cleaner	Journey Level	\$14.49		1		View
Whitman	Inland Boatmen	Journey Level	\$14.49		1		View

Whitman	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator, Foamer Operator	\$14.49		<u>1</u>		View
Whitman	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	\$14.49		<u>1</u>		View
Whitman	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	\$14.49		<u>1</u>		View
Whitman	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	\$14.49		<u>1</u>		View
Whitman	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Tv Truck Operator	\$14.49		<u>1</u>		View
Whitman	Insulation Applicators	Journey Level	\$53.36	<u>7E</u>	<u>4X</u>	<u>8N</u>	View
Whitman	Ironworkers	Journeyman	\$67.91	<u>7N</u>	<u>1O</u>		View
Whitman	Laborers	Air And Hydraulic Track Drill	\$48.20	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Asphalt Raker	\$48.20	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Asphalt Roller, Walking	\$47.91	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Brick Pavers	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Brush Hog Feeder	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Brush Machine	\$48.20	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Caisson Worker, Free Air	\$48.20	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Carpenter Tender	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Cement Finisher Tender	\$47.91	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Cement Handler	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Chain Saw Operator & Faller	\$48.20	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Clean-up Laborer	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Compaction Equipment	\$47.91	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Concrete Crewman	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Concrete Saw, Walking	\$47.91	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Concrete Signalman	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Concrete Stack	\$48.20	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Confined Space Attendant	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Construction Specialist	\$48.39	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Crusher Feeder	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Demolition	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Demolition Torch	\$47.91	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Dope Pot Fireman, Non-mechanical	\$47.91	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Driller Helper (when Required To Move & Position Machine)	\$47.91	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Drills With Dual Masts	\$48.50	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Dry Stack Walls	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Dumpman	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Erosion Control Laborer	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Firewatch	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View
Whitman	Laborers	Form Cleaning Machine Feeder, Stacker	\$47.62	<u>7B</u>	<u>1M</u>	<u>8Z</u>	View

Whitman	Laborers	Form Setter, Paving	\$47.91	7B	1M	8Z	View
Whitman	Laborers	General Laborer	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Grade Checker	\$50.33	7B	1M	8Z	View
Whitman	Laborers	Grout Machine Header Tender	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Guard Rail	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Gunite	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Hazardous Waste Worker (level A)	\$48.50	7B	1M	8Z	View
Whitman	Laborers	Hazardous Waste Worker (level B)	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Hazardous Waste Worker (level C)	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Hazardous Waste Worker (level D)	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Hdpe Or Similar Liner Installer	\$47.62	7B	1M	8Z	View
Whitman	Laborers	High Scaler	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Industrial Technician	\$61.41	7B	1M	8Z	View
Whitman	Laborers	Jackhammer Operator Miner, Class "b"	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Laser Beam Operator	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Miner, Class "a"	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Miner, Class "c"	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Miner, Class "d"	\$48.50	7B	1M	8Z	View
Whitman	Laborers	Monitor Operator, Air Track Or Similar Mounting	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Mortar Mixer	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Nipper	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Nozzleman	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Nozzleman, Water (to Include Fire Hose), Air Or Steam	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Pavement Breaker, 90 Lbs. & Over	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Pavement Breaker, Under 90 Lbs.	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Pilot Car	\$44.88	7B	1M	8Z	View
Whitman	Laborers	Pipelayer	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Pipelayer, Corrugated Metal Culvert And Multi-plate.	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Pipewrapper	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Plasterer Tenders	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Pot Tender	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Powderman	\$49.97	7B	1M	8Z	View
Whitman	Laborers	Powderman Helper	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Power Buggy Operator	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Power Tool Operator, Gas, Electric, Pneumatic	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Rad-Con Technician	\$61.41	7B	1M	8Z	View
Whitman	Laborers	Railroad Equipment, Power Driven, Except Dual Mobile	\$47.91	7B	1M	8Z	View

Whitman	Laborers	Railroad Power Spiker Or Puller, Dual Mobile	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Remote Equipment Operator	\$48.50	7B	1M	8Z	View
Whitman	Laborers	Remote Equipment Operator (i.e Compaction And Demolition)	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Rigger/signal Person	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Riprap Person	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Rodder & Spreader	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Sand Hogs Under Compressed Air Conditions	\$95.15	7B	1M	8Z	View
Whitman	Laborers	Sandblast Tailhoseman	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Scaffold Erector, Wood Or Steel	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Scaleman	\$44.88	7B	1M	8Z	View
Whitman	Laborers	Stake Jumper	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Structural Mover	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Tailhoseman (water Nozzle)	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Timber Bucker & Faller (by Hand)	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Track Laborer (rr)	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Traffic Control Laborer	\$44.88	7B	1M	8Z	View
Whitman	Laborers	Traffic Control Supervisor	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Trencher, Shawnee	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Trenchless Technology Technician	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Truck Loader	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Truck Mounted Attenuator	\$44.88	7B	1M	8Z	View
Whitman	Laborers	Tugger Operator	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Vibrators, All	\$48.20	7B	1M	8Z	View
Whitman	Laborers	Wagon Drills	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Water Pipe Liner	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Welder, Electrical, Manual Or Automatic (hdpe Or Similar Pipe And Liner)	\$48.50	7B	1M	8Z	View
Whitman	Laborers	Well-point Person	\$47.62	7B	1M	8Z	View
Whitman	Laborers	Wheelbarrow, Power Driven	\$47.91	7B	1M	8Z	View
Whitman	Laborers	Window Washer, Cleaner	\$44.88	7B	1M	8Z	View
Whitman	Laborers - Underground Sewer & Water	General Laborer & Topman	\$48.20	7B	1M	8Z	View
Whitman	Laborers - Underground Sewer & Water	Pipe Layer	\$48.20	7B	1M	8Z	View
Whitman	Landscape Construction	Landscape Laborer	\$44.88	7B	1M	8Z	View
Whitman	Landscape Construction	Landscape Operator	\$55.13	7Z	4S	9A	View
Whitman	Landscape Maintenance	Groundskeeper	\$14.49		1		View
Whitman	Lathers	Journey Level	\$53.36	7E	4X	8N	View
Whitman	Marble Setters	Journey Level	\$55.44	5A	1M		View
Whitman	Metal Fabrication (In Shop)	Fitter	\$14.49		1		View
Whitman	Metal Fabrication (In Shop)	Laborer	\$14.49		1		View

Whitman	Metal Fabrication (In Shop)	Machine Operator	\$14.49		1		View
Whitman	Metal Fabrication (In Shop)	Painter	\$14.49		1		View
Whitman	Metal Fabrication (In Shop)	Welder	\$14.49		1		View
Whitman	Millwright	Journey Level	\$73.35	5A	1B		View
Whitman	Modular Buildings	Journey Level	\$14.49		1		View
Whitman	Painters	Commercial Painter	\$43.01	6Z	1W		View
Whitman	Painters	Industrial Painter	\$50.32	6Z	1W	9D	View
Whitman	Pile Driver	Journey Level	\$57.36	7E	4X	8N	View
Whitman	Plasterers	Journey Level	\$53.51	7K	1N		View
Whitman	Playground & Park Equipment Installers	Journey Level	\$14.49		1		View
Whitman	Plumbers & Pipefitters	Journey Level	\$88.41	6Z	1Q		View
Whitman	Power Equipment Operators	A-frame Truck (2 Or More Drums)	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	A-frame Truck (single Drum)	\$54.30	7Z	4S	9A	View
Whitman	Power Equipment Operators	All Tower Cranes	\$59.25	7Z	4S	9A	View
Whitman	Power Equipment Operators	Asphalt Plant Operator	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Assistant Plant Operator, Fireman Or Pugmixer (asphalt)	\$54.30	7Z	4S	9A	View
Whitman	Power Equipment Operators	Assistant Refrigeration Plant & Chiller Operator (over 1000 Ton)	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Assistant Refrigeration Plant (under 1000 Ton)	\$54.30	7Z	4S	9A	View
Whitman	Power Equipment Operators	Automatic Subgrader (ditches & Trimmers)	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Backfillers (cleveland & Similar)	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Backhoe & Hoe Ram (under 3/4 Yd.)	\$55.31	7Z	4S	9A	View
Whitman	Power Equipment Operators	Backhoe (45,000 Gw & Under)	\$55.31	7Z	4S	9A	View
Whitman	Power Equipment Operators	Backhoe (45,000 Gw To 110,000 Gw)	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Backhoe (over 110,000 Gw)	\$55.90	7Z	4S	9A	View
Whitman	Power Equipment Operators	Backhoes & Hoe Ram (3 Yds & Over)	\$55.90	7Z	4S	9A	View
Whitman	Power Equipment Operators	Backhoes & Hoe Ram (3/4 Yd. To 3 Yd.)	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Bagley Or Stationary Scraper	\$54.30	7Z	4S	9A	View
Whitman	Power Equipment Operators	Batch & Wet Mix Operator (multiple Units, 2 & Incl. 4)	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Batch Plant & Wet Mix Operator, Single Unit (concrete)	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Batch Plant (over 4 Units)	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Belt Finishing Machine	\$54.30	7Z	4S	9A	View
Whitman	Power Equipment Operators	Belt Loader (kocal Or Similar)	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Belt-crete Conveyors With Power Pack Or Similar	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Bending Machine	\$54.96	7Z	4S	9A	View

Whitman	Power Equipment Operators	Bit Grinders	\$53.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Blade (finish & Bluetop), Automatic, Cmi, Abc, Finish Athey & Huber & Similar When Used As Automatic	\$55.90	7Z	4S	9A	View
Whitman	Power Equipment Operators	Blade Operator (motor Patrol & Attachments)	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Blower Operator (cement)	\$54.30	7Z	4S	9A	View
Whitman	Power Equipment Operators	Boat Operator	\$53.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Bob Cat (skid Steer)	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Bolt Threading Machine	\$53.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Boom Cats (side)	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Boring Machine (earth)	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Boring Machine (Rock Under 8 inch Bit - Quarry Master, Joy Or Similar)	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Bump Cutter (wayne, Saginaw Or Similar)	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Cableway Controller (dispatcher)	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Cableway Operators	\$55.90	7Z	4S	9A	View
Whitman	Power Equipment Operators	Canal Lining Machine (concrete)	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Carrydeck & Boom Truck (under 25 Tons)	\$55.31	7Z	4S	9A	View
Whitman	Power Equipment Operators	Cement Hog	\$54.30	7Z	4S	9A	View
Whitman	Power Equipment Operators	Chipper (without Crane) Cleaning & Doping Machine (pipeline)	\$54.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Clamshell, Dragline	\$57.63	7Z	4S	9A	View
Whitman	Power Equipment Operators	Compactor (self-propelled With Blade)	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Compressor (2000 Cfm Or Over, 2 Or More, Gas Diesel Or Electric Power)	\$54.30	7Z	4S	9A	View
Whitman	Power Equipment Operators	Compressors (under 2000 Cfm, Gas, Diesel Or Electric Power)	\$53.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Concrete Cleaning / Decontamination Machine Operator	\$55.90	7Z	4S	9A	View
Whitman	Power Equipment Operators	Concrete Pump Boon Truck	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Concrete Pumps (squeeze-crete, Flow-crete, Whitman & Similar)	\$55.13	7Z	4S	9A	View
Whitman	Power Equipment Operators	Concrete Saw (multiple Cut)	\$54.30	7Z	4S	9A	View
Whitman	Power Equipment Operators	Concrete Slip Form Paver	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Conveyor Aggregate Delivery Systems (c.a.d.)	\$55.61	7Z	4S	9A	View
Whitman	Power Equipment Operators	Crane Oiler & Cable Tender, Mucking Machine	\$53.96	7Z	4S	9A	View
Whitman	Power Equipment Operators	Crane Oiler - Driver (cdl Required)	\$54.30	7Z	4S	9A	View

Whitman	Power Equipment Operators	Cranes (100 to 299 Tons) All Attachments	\$58.49	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Cranes (25 Tons & Under), All Attachments Incl. Clamshell, Dragline	\$55.31	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Cranes (25 Tons To And Including 44 Tons), All Attachments Incl. Clamshell, Dragline	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Cranes (300 Tons and Over) All Attachments	\$59.25	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Cranes (45 Tons To 55 Tons), All Attachments Incl. Clamshell And Dragline	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Cranes (56 to 99 tons) and overhead, rail and Quick Tower. All attachment incl. Clamshell, Dragline	\$57.63	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Crusher Feeder	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Crusher, Grizzle & Screening Plant Operator	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Curb Extruder (asphalt Or Concrete)	\$55.13	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Deck Engineer	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Deck Hand	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Derricks & Stifflegs (65 Tons & Over)	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Derricks & Stifflegs (under 65 Tons)	\$55.31	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Distributor Leverman	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Ditch Witch Or Similar	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Dope Pots (power Agitated	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Dozer / Tractor (up To D-6 Or Equivalent) And Traxcavator	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Dozer / Tractors (d-6 & Equivalent & Over)	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Dozer, 834 R/t & Similar	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Drill Doctor	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Driller Licensed	\$57.63	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Drillers Helper	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Drilling Equipment (8 inch Bit & Over - Robbins, Reverse Circulation & Similar)	\$55.31	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Drills (churn, Core, Calyx Or Diamond)	\$55.13	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Elevating Belt (holland Type)	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Elevating Belt-type Loader (euclid, Barber Green & Similar)	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Elevating Grader-type Loader (dumor, Adams Or Similar)	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Elevator Hoisting Materials	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View

Whitman	Power Equipment Operators	Equipment Serviceman, Greaser & Oiler	\$55.13	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Fireman & Heater Tender	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Fork Lift Or Lumber Stacker, Hydra-life & Similar	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Generator Plant Engineers (diesel Or Electric)	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Gin Trucks (pipeline)	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Grade Checker	\$55.31	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Gunite Combination Mixer & Compressor	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	H.d. Mechanic	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	H.d. Welder	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Heavy Equipment Robotics Operator	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Helicopter Pilot	\$57.63	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Helper, Mechanic Or Welder, H.D	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Hoe Ram	\$55.31	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Hoist (2 Or More Drums Or Tower Hoist)	\$55.13	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Hoist, Single Drum	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Hydraulic Platform Trailers (goldhofer, Shaurerly And Similar)	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Hydro-seeder, Mulcher, Nozzleman	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Lime Batch Tank Operator (recycle Train)	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Lime Brain Operator (recycle Train)	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Loader (360 Degrees Revolving Koehring Scooper Or Similar)	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Loader Operator (front-end & Overhead, 4 Yds. Incl. 8 Yds.)	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Loaders (bucket Elevators And Conveyors)	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Loaders (overhead & Front- end, Over 8 Yds.)	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Loaders (overhead & Front- end, Under 4 Yds.. R/t)	\$55.13	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Loaders (overhead And Front- end, 10 Yds. & Over)	\$57.63	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Locomotive Engineer	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Longitudinal Float	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Master Environmental Maintenance Technician	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Mixer (portable - Concrete)	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Mixermobile	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators	Mobile Crusher Operator (recycle Train)	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View

Whitman	Power Equipment Operators	Mucking Machine	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Multiple Dozer Units With Single Blade	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Pavement Breaker, Hydra-hammer & Similar	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Paving (dual Drum)	\$55.31	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Paving Machine (asphalt And Concrete)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Piledriving Engineers	\$55.31	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Plant Oiler	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Posthole Auger Or Punch	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Power Broom	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Pump (grout Or Jet)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Pumpman	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Quad-track Or Similar Equipment	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Railroad Ballast Regulation Operator (self-propelled)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Railroad Power Tamper Operator (self-propelled)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Railroad Tamper Jack Operator (self-propelled)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Railroad Track Liner Operator (self-propelled)	\$55.31	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Refrigeration Plant Engineer (1000 Tons & Over)	\$55.31	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Refrigeration Plant Engineer (under 1000 Ton)	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Rollerman (finishing Asphalt Pavement)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Rollers, All Types On Subgrade, Including Seal And Chip Coating (farm Type, Case, John Deere And Similar, or Compacting Vibrator), Except When Pulled B	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Roto Mill (pavement Grinder)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Rotomill Groundsman	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Rubber-tired Scrapers (multiple Engine With Three Or More Scrapers)	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Rubber-tired Skidders (r/t With Or Without Attachments)	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Scrapers, All, Rubber-tired	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Screed Operator	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Shovels (3 Yds. & Over)	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Shovels (under 3 Yds.)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Signalman (whirleys, Highline, Hammerheads Or Similar)	\$55.31	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Soil Stabilizer (p & H Or Similar)	\$54.96	ZZ	4S	9A	View

Whitman	Power Equipment Operators	Spray Curing Machine (concrete)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Spreader Box (self-propelled)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Spreader Machine	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Steam Cleaner	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Straddle Buggy (ross & Similar On Construction Job Only)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Surface Heater & Planer Machine	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Tractor (farm Type R/t With Attachments, Except Backhoe)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Traverse Finish Machine	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Trenching Machines (7 Ft. Depth & Over)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Trenching Machines (under 7 Ft. Depth Capacity)	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Tug Boat Operator	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Tugger Operator	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Turnhead (with Re-screening)	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Turnhead Operator	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Ultra High Pressure Waterjet Cutting Tool System Operator, (30,000 Psi)	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Vactor Guzzler, Super Sucker	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Vacuum Blasting Machine Operator	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Vacuum Drill (reverse Circulation Drill Under 8 Inch Bit)	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Welding Machine	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators	Whirleys & Hammerheads, All	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	A-frame Truck (2 Or More Drums)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	A-frame Truck (single Drum)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	All Tower Cranes	\$59.25	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Asphalt Plant Operator	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Assistant Plant Operator, Fireman Or Pugmixer (asphalt)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Assistant Refrigeration Plant & Chiller Operator (over 1000 Ton)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Assistant Refrigeration Plant (under 1000 Ton)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Automatic Subgrader (ditches & Trimmers)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Backfillers (cleveland & Similar)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Backhoe & Hoe Ram (under 3/4 Yd.)	\$55.31	ZZ	4S	9A	View

Whitman	Power Equipment Operators-Underground Sewer & Water	Backhoe (45,000 Gw & Under)	\$55.31	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Backhoe (45,000 Gw To 110,000 Gw)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Backhoe (over 110,000 Gw)	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Backhoes & Hoe Ram (3 Yds & Over)	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Backhoes & Hoe Ram (3/4 Yd. To 3 Yd.)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Bagley Or Stationary Scraper	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Batch & Wet Mix Operator (multiple Units, 2 & Incl. 4)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Batch Plant & Wet Mix Operator, Single Unit (concrete)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Batch Plant (over 4 Units)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Belt Finishing Machine	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Belt Loader (kocal Or Similar)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Belt-crete Conveyors With Power Pack Or Similar	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Bending Machine	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Bit Grinders	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Blade (finish & Bluetop), Automatic, Cmi, Abc, Finish Athey & Huber & Similar When Used As Automatic	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Blade Operator (motor Patrol & Attachments)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Blower Operator (cement)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Boat Operator	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Bob Cat (skid Steer)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Bolt Threading Machine	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Boom Cats (side)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Boring Machine (earth)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Boring Machine (Rock Under 8 inch Bit - Quarry Master, Joy Or Similar)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Bump Cutter (wayne, Saginaw Or Similar)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-	Cableway Controller	\$55.61	ZZ	4S	9A	View

	Underground Sewer & Water	(dispatcher)					
Whitman	Power Equipment Operators-Underground Sewer & Water	Cableway Operators	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Canal Lining Machine (concrete)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Carrydeck & Boom Truck (under 25 Tons)	\$55.31	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Cement Hog	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Chipper (without Crane) Cleaning & Doping Machine (pipeline)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Clamshell, Dragline	\$57.63	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Compactor (self-propelled With Blade)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Compressor (2000 Cfm Or Over, 2 Or More, Gas Diesel Or Electric Power)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Compressors (under 2000 Cfm, Gas, Diesel Or Electric Power)	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Concrete Cleaning / Decontamination Machine Operator	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Concrete Pump Boon Truck	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Concrete Pumps (squeeze-crete, Flow-crete, Whitman & Similar)	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Concrete Saw (multiple Cut)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Concrete Slip Form Paver	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Conveyor Aggregate Delivery Systems (c.a.d.)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Crane Oiler & Cable Tender, Mucking Machine	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Crane Oiler - Driver (cdl Required)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Cranes (100 to 299 Tons) All Attachments	\$58.49	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Cranes (25 Tons & Under), All Attachments Incl. Clamshell, Dragline	\$55.31	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Cranes (25 Tons To And Including 44 Tons), All Attachments Incl. Clamshell, Dragline	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Cranes (300 Tons and Over) All Attachments	\$59.25	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Cranes (45 Tons To 55 Tons), All Attachments Incl. Clamshell And Dragline	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-	Cranes (56 to 99 tons) and	\$57.63	ZZ	4S	9A	View

	Underground Sewer & Water	overhead, rail and Quick Tower. All attachment incl. Clamshell, Dragline					
Whitman	Power Equipment Operators-Underground Sewer & Water	Crusher Feeder	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Crusher, Grizzle & Screening Plant Operator	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Curb Extruder (asphalt Or Concrete)	\$55.13	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Deck Engineer	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Deck Hand	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Derricks & Stifflegs (65 Tons & Over)	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Derricks & Stifflegs (under 65 Tons)	\$55.31	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Distributor Leverman	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Ditch Witch Or Similar	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Dope Pots (power Agitated	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Dozer / Tractor (up To D-6 Or Equivalent) And Traxcavator	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Dozer / Tractors (d-6 & Equivalent & Over)	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Dozer, 834 R/t & Similar	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Drill Doctor	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Driller Licensed	\$57.63	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Drillers Helper	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Drilling Equipment (8 inch Bit & Over - Robbins, Reverse Circulation & Similar)	\$55.31	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Drills (churn, Core, Calyx Or Diamond)	\$55.13	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Elevating Belt (holland Type)	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Elevating Belt-type Loader (euclid, Barber Green & Similar)	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Elevating Grader-type Loader (dumor, Adams Or Similar)	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Elevator Hoisting Materials	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Equipment Serviceman, Greaser & Oiler	\$55.13	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Fireman & Heater Tender	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View

Whitman	Power Equipment Operators-Underground Sewer & Water	Fork Lift Or Lumber Stacker, Hydra-life & Similar	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Generator Plant Engineers (diesel Or Electric)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Gin Trucks (pipeline)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Grade Checker	\$55.31	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Gunitite Combination Mixer & Compressor	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	H.d. Mechanic	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	H.d. Welder	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Heavy Equipment Robotics Operator	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Helicopter Pilot	\$57.63	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Helper, Mechanic Or Welder, H.D	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Hoe Ram	\$55.31	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Hoist (2 Or More Drums Or Tower Hoist)	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Hoist, Single Drum	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Hydraulic Platform Trailers (goldhofer, Shaurerly And Similar)	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Hydro-seeder, Mulcher, Nozzleman	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Lime Batch Tank Operator (recycle Train)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Lime Brain Operator (recycle Train)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Loader (360 Degrees Revolving Koehring Scooper Or Similar)	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Loader Operator (front-end & Overhead, 4 Yds. Incl. 8 Yds.)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Loaders (bucket Elevators And Conveyors)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Loaders (overhead & Front-end, Over 8 Yds.)	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Loaders (overhead & Front-end, Under 4 Yds.. R/t)	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Locomotive Engineer	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Longitudinal Float	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Master Environmental Maintenance Technician	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Mixer (portable - Concrete)	\$54.30	ZZ	4S	9A	View

Whitman	Power Equipment Operators-Underground Sewer & Water	Mixermobile	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Mobile Crusher Operator (recycle Train)	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Mucking Machine	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Multiple Dozer Units With Single Blade	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Pavement Breaker, Hydra-hammer & Similar	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Paving (dual Drum)	\$55.31	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Paving Machine (asphalt And Concrete)	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Piledriving Engineers	\$55.31	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Plant Oiler	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Posthole Auger Or Punch	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Power Broom	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Pump (grout Or Jet)	\$54.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Pumpman	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Quad-track Or Similar Equipment	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Railroad Ballast Regulation Operator (self-propelled)	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Railroad Power Tamper Operator (self-propelled)	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Railroad Tamper Jack Operator (self-propelled)	\$54.30	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Railroad Track Liner Operator (self-propelled)	\$55.31	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Refrigeration Plant Engineer (1000 Tons & Over)	\$55.31	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Refrigeration Plant Engineer (under 1000 Ton)	\$55.13	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Rollerman (finishing Asphalt Pavement)	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Rollers, All Types On Subgrade, Including Seal And Chip Coating (farm Type, Case, John Deere And Similar,or Compacting Vibrator), Except When Pulled B	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Roto Mill (pavement Grinder)	\$55.61	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Rotomill Groundsman	\$55.13	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View

Whitman	Power Equipment Operators-Underground Sewer & Water	Rubber-tired Scrapers (multiple Engine With Three Or More Scrapers)	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Rubber-tired Skidders (r/t With Or Without Attachments)	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Scrapers, All, Rubber-tired	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Screed Operator	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Shovels (3 Yds. & Over)	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Shovels (under 3 Yds.)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Signalman (whirleys, Highline, Hammerheads Or Similar)	\$55.31	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Soil Stabilizer (p & H Or Similar)	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Spray Curing Machine (concrete)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Spreader Box (self-propelled)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Spreader Machine	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Steam Cleaner	\$53.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Straddle Buggy (ross & Similar On Construction Job Only)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Surface Heater & Planer Machine	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Tractor (farm Type R/t With Attachments, Except Backhoe)	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Traverse Finish Machine	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Trenching Machines (7 Ft. Depth & Over)	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Trenching Machines (under 7 Ft. Depth Capacity)	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Tug Boat Operator	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Tugger Operator	\$54.30	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Turnhead (with Re-screening)	\$55.13	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Turnhead Operator	\$54.96	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Ultra High Pressure Waterjet Cutting Tool System Operator, (30,000 Psi)	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Vactor Guzzler, Super Sucker	\$55.61	ZZ	4S	9A	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Vacuum Blasting Machine Operator	\$55.90	ZZ	4S	9A	View
Whitman	Power Equipment Operators-	Vacuum Drill (reverse	\$55.13	ZZ	4S	9A	View

	Underground Sewer & Water	Circulation Drill Under 8 Inch Bit)					
Whitman	Power Equipment Operators-Underground Sewer & Water	Welding Machine	\$53.96	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Equipment Operators-Underground Sewer & Water	Whirleys & Hammerheads, All	\$55.90	<u>7Z</u>	<u>4S</u>	<u>9A</u>	View
Whitman	Power Line Clearance Tree Trimmers	Journey Level In Charge	\$57.22	<u>5A</u>	<u>4A</u>		View
Whitman	Power Line Clearance Tree Trimmers	Spray Person	\$54.32	<u>5A</u>	<u>4A</u>		View
Whitman	Power Line Clearance Tree Trimmers	Tree Equipment Operator	\$57.22	<u>5A</u>	<u>4A</u>		View
Whitman	Power Line Clearance Tree Trimmers	Tree Trimmer	\$51.18	<u>5A</u>	<u>4A</u>		View
Whitman	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	\$38.99	<u>5A</u>	<u>4A</u>		View
Whitman	Refrigeration & Air Conditioning Mechanics	Journey Level	\$88.41	<u>6Z</u>	<u>1Q</u>		View
Whitman	Residential Brick Mason	Journey Level	\$55.44	<u>5A</u>	<u>1M</u>		View
Whitman	Residential Carpenters	Journey Level	\$25.00		<u>1</u>		View
Whitman	Residential Cement Masons	Journey Level	\$16.24		<u>1</u>		View
Whitman	Residential Drywall Applicators	Journey Level	\$25.64		<u>1</u>		View
Whitman	Residential Drywall Tapers	Journey Level	\$48.58	<u>7E</u>	<u>1P</u>		View
Whitman	Residential Electricians	Journey Level	\$31.82		<u>1</u>		View
Whitman	Residential Glaziers	Journey Level	\$20.72		<u>1</u>		View
Whitman	Residential Insulation Applicators	Journey Level	\$14.86		<u>1</u>		View
Whitman	Residential Laborers	Journey Level	\$22.44		<u>1</u>		View
Whitman	Residential Marble Setters	Journey Level	\$55.44	<u>5A</u>	<u>1M</u>		View
Whitman	Residential Painters	Journey Level	\$25.08		<u>1</u>		View
Whitman	Residential Plumbers & Pipefitters	Journey Level	\$21.92		<u>1</u>		View
Whitman	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	\$14.49		<u>1</u>		View
Whitman	Residential Sheet Metal Workers	Journey Level (Field or Shop)	\$65.36	<u>5I</u>	<u>1B</u>		View
Whitman	Residential Soft Floor Layers	Journey Level	\$17.62		<u>1</u>		View
Whitman	Residential Sprinkler Fitters (Fire Protection)	Journey Level	\$14.49		<u>1</u>		View
Whitman	Residential Stone Masons	Journey Level	\$55.44	<u>5A</u>	<u>1M</u>		View
Whitman	Residential Terrazzo Workers	Journey Level	\$20.61		<u>1</u>		View
Whitman	Residential Terrazzo/Tile Finishers	Journey Level	\$17.92		<u>1</u>		View
Whitman	Residential Tile Setters	Journey Level	\$20.61		<u>1</u>		View
Whitman	Roofers	Journey Level	\$44.79	<u>5I</u>	<u>1R</u>		View
Whitman	Roofers	Using Irritable Bituminous Materials	\$46.79	<u>5I</u>	<u>1R</u>		View
Whitman	Sheet Metal Workers	Journey Level (Field or Shop)	\$73.36	<u>6Z</u>	<u>1B</u>		View
Whitman	Sign Makers & Installers (Electrical)	Journey Level	\$14.49		<u>1</u>		View
Whitman	Sign Makers & Installers (Non-	Journey Level	\$14.49		<u>1</u>		View

	Electrical)						
Whitman	Soft Floor Layers	Journey Level	\$55.56	5A	3J		View
Whitman	Solar Controls For Windows	Journey Level	\$14.49		1		View
Whitman	Sprinkler Fitters (Fire Protection)	Journey Level	\$64.44	7J	1R		View
Whitman	Stage Rigging Mechanics (Non Structural)	Journey Level	\$14.49		1		View
Whitman	Stone Masons	Journey Level	\$55.44	5A	1M		View
Whitman	Street And Parking Lot Sweeper Workers	Journey Level	\$14.49		1		View
Whitman	Surveyors	Chain Person	\$14.49	0	1		View
Whitman	Surveyors	Instrument Person	\$14.49	0	1		View
Whitman	Surveyors	Party Chief	\$15.05	0	1		View
Whitman	Telecommunication Technicians	Journey Level	\$50.89	5I	1B		View
Whitman	Telephone Line Construction - Outside	Cable Splicer	\$39.15	5A	2B		View
Whitman	Telephone Line Construction - Outside	Hole Digger/Ground Person	\$26.29	5A	2B		View
Whitman	Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	\$32.72	5A	2B		View
Whitman	Telephone Line Construction - Outside	Telephone Lineperson	\$37.00	5A	2B		View
Whitman	Terrazzo Workers	Journey Level	\$43.81	5A	1M		View
Whitman	Tile Setters	Journey Level	\$43.81	5A	1M		View
Whitman	Tile, Marble & Terrazzo Finishers	Journey Level	\$35.93	5A	1M		View
Whitman	Traffic Control Stripers	Journey Level	\$51.90	7A	1K		View
Whitman	Truck Drivers	Asphalt Mix Over 20 Yards	\$54.60	5D	1V	8M	View
Whitman	Truck Drivers	Asphalt Mix To 20 Yards	\$54.40	5D	1V	8M	View
Whitman	Truck Drivers	Dump Truck	\$54.40	5D	1V	8M	View
Whitman	Truck Drivers	Dump Truck & Trailer	\$54.60	5D	1V	8M	View
Whitman	Truck Drivers	Other Trucks	\$54.29	5D	1V	8M	View
Whitman	Truck Drivers - Ready Mix	Transit Mixers 20 yards and under	\$54.60	5D	1V	8M	View
Whitman	Truck Drivers - Ready Mix	Transit Mixers over 20 yards	\$54.94	5D	1V	8M	View
Whitman	Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	\$14.49		1		View
Whitman	Well Drillers & Irrigation Pump Installers	Oiler	\$14.49		1		View
Whitman	Well Drillers & Irrigation Pump Installers	Well Driller	\$18.00		1		View

Overtime Codes

Overtime calculations are based on the hourly rate actually paid to the worker. On public works projects, the hourly rate must be not less than the prevailing rate of wage minus the hourly rate of the cost of fringe benefits actually provided for the worker.

1. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
 - B. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - C. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - D. The first two (2) hours before or after a five-eight (8) hour workweek day or a four-ten (10) hour workweek day and the first eight (8) hours worked the next day after either workweek shall be paid at one and one-half times the hourly rate of wage. All additional hours worked and all worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.
 - G. The first ten (10) hours worked on Saturdays and the first ten (10) hours worked on a fifth calendar weekday in a four-ten hour schedule, shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - H. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions or equipment breakdown) shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - I. All hours worked on Sundays and holidays shall also be paid at double the hourly rate of wage.
 - J. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage.
 - K. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
 - M. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - N. All hours worked on Saturdays (except makeup days) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

1. O. The first ten (10) hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays, holidays and after twelve (12) hours, Monday through Friday and after ten (10) hours on Saturday shall be paid at double the hourly rate of wage.
- P. All hours worked on Saturdays (except makeup days if circumstances warrant) and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
- Q. The first two (2) hours after eight (8) regular hours Monday through Friday and up to ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays (except Christmas day) shall be paid at double the hourly rate of wage. All hours worked on Christmas day shall be paid at two and one-half times the hourly rate of wage.
- R. All hours worked on Sundays and holidays shall be paid at two times the hourly rate of wage.
- U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays (except Labor Day) shall be paid at two times the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.
- V. All hours worked on Sundays and holidays (except Thanksgiving Day and Christmas day) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Thanksgiving Day and Christmas day shall be paid at double the hourly rate of wage.
- W. All hours worked on Saturdays and Sundays (except make-up days due to conditions beyond the control of the employer)) shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
- X. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over twelve (12) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage. When holiday falls on Saturday or Sunday, the day before Saturday, Friday, and the day after Sunday, Monday, shall be considered the holiday and all work performed shall be paid at double the hourly rate of wage.
- Y. All hours worked outside the hours of 5:00 am and 5:00 pm (or such other hours as may be agreed upon by any employer and the employee) and all hours worked in excess of eight (8) hours per day (10 hours per day for a 4 x 10 workweek) and on Saturdays and holidays (except labor day) shall be paid at one and one-half times the hourly rate of wage. (except for employees who are absent from work without prior approval on a scheduled workday during the workweek shall be paid at the straight-time rate until they have worked 8 hours in a day (10 in a 4 x 10 workweek) or 40 hours during that workweek.) All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and Labor Day shall be paid at double the hourly rate of wage.
- Z. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid the straight time rate of pay in addition to holiday pay.

Overtime Codes Continued

2. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
- B. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.
- F. The first eight (8) hours worked on holidays shall be paid at the straight hourly rate of wage in addition to the holiday pay. All hours worked in excess of eight (8) hours on holidays shall be paid at double the hourly rate of wage.
- M. This code appears to be missing. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage.
- O. All hours worked on Sundays and holidays shall be paid at one and one-half times the hourly rate of wage.
- R. All hours worked on Sundays and holidays and all hours worked over sixty (60) in one week shall be paid at double the hourly rate of wage.
- U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked over 12 hours in a day or on Sundays and holidays shall be paid at double the hourly rate of wage.
3. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
- F. All hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.
- H. All work performed on Sundays between March 16th and October 14th and all Holidays shall be compensated for at two (2) times the regular rate of pay. Work performed on Sundays between October 15th and March 15th shall be compensated at one and one half (1-1/2) times the regular rate of pay.
- J. All hours worked between the hours of 10:00 pm and 5:00 am, Monday through Friday, and all hours worked on Saturdays shall be paid at a one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
- K. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.
- After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the eight (8) hours rest period.
4. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
- A. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

4. C. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay. On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay, except that if the job is down on Monday through Friday due to weather conditions or other conditions outside the control of the employer, the first ten (10) hours on Saturday may be worked at the straight time rate of pay. All hours worked over twelve (12) hours in a day and all hours worked on Sunday and Holidays shall be paid at two (2) times the straight time rate of pay.

- D. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturday, Sundays and holidays shall be paid at double the hourly rate of pay. Rates include all members of the assigned crew.

EXCEPTION:

On all multipole structures and steel transmission lines, switching stations, regulating, capacitor stations, generating plants, industrial plants, associated installations and substations, except those substations whose primary function is to feed a distribution system, will be paid overtime under the following rates:

The first two (2) hours after eight (8) regular hours Monday through Friday of overtime on a regular workday, shall be paid at one and one-half times the hourly rate of wage. All hours in excess of ten (10) hours will be at two (2) times the hourly rate of wage. The first eight (8) hours worked on Saturday will be paid at one and one-half (1-1/2) times the hourly rate of wage. All hours worked in excess of eight (8) hours on Saturday, and all hours worked on Sundays and holidays will be at the double the hourly rate of wage.

All overtime eligible hours performed on the above described work that is energized, shall be paid at the double the hourly rate of wage.

- E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one and one half (1½) times the regular shift rate for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

- G. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

- I. The First eight (8) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) per day on Saturdays shall be paid at double the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

4. J. The first eight (8) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) hours on a Saturday shall be paid at double the hourly rate of wage. All hours worked over twelve (12) in a day, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.
- K. All hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage, so long as Saturday is the sixth consecutive day worked. All hours worked over twelve (12) in a day Monday through Saturday, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.
- L. The first twelve (12) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on a Saturday in excess of twelve (12) hours shall be paid at double the hourly rate of pay. All hours worked over twelve (12) in a day Monday through Friday, and all hours worked on Sundays shall be paid at double the hourly rate of wage. All hours worked on a holiday shall be paid at one and one-half times the hourly rate of wage, except that all hours worked on Labor Day shall be paid at double the hourly rate of pay.
- S. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, work performed in excess of (10) hours shall be paid at one and one half (1-1/2) times the hourly rate of pay. On Monday through Friday, work performed outside the normal work hours of 6:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations).
- All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed on Sundays and holidays shall be paid at double the hourly rate of wage.
- When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.
- Multiple Shift Operations: When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate.
- Special Shifts: The Special Shift Premium is the basic hourly rate of pay plus \$2.00 an hour. When due to conditions beyond the control of the employer or when an owner (not acting as the contractor), a government agency or the contract specifications require more than four (4) hours of a special shift can only be performed outside the normal 6am to 6pm shift then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid the special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday).
- U. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. (Except on makeup days if work is lost due to inclement weather, then the first eight (8) hours on Saturday may be paid the regular rate.) All hours worked over twelve (12) hours Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

4. V. Work performed in excess of ten (10) hours of straight time per day when four ten (10) hour shifts are established or outside the normal shift (5 am to 6pm), and all work on Saturdays, except for make-up days shall be paid at time and one-half (1 ½) the straight time rate.

In the event the job is down due to weather conditions, then Saturday may, be worked as a voluntary make-up day at the straight time rate. However, Saturday shall not be utilized as a make-up day when a holiday falls on Friday. All work performed on Sundays and holidays and work in excess of twelve (12) hours per day shall be paid at double (2x) the straight time rate of pay.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

- W. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

- X. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage. Work performed outside the normal shift of 6 am to 6pm shall be paid at one and one-half the straight time rate, (except for special shifts or three shift operations). All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. Shifts may be established when considered necessary by the Employer.

The Employer may establish shifts consisting of eight (8) or ten (10) hours of work (subject to WAC 296-127-022), that shall constitute a normal forty (40) hour work week. The Employer can change from a 5-eight to a 4-ten hour schedule or back to the other. All hours of work on these shifts shall be paid for at the straight time hourly rate. Work performed in excess of eight hours (or ten hours per day (subject to WAC 296-127-022) shall be paid at one and one-half the straight time rate.

When due to conditions beyond the control of the Employer, or when contract specifications require that work can only be performed outside the regular day shift, then by mutual agreement a special shift may be worked at the straight time rate, eight (8) hours work for eight (8) hours pay. The starting time shall be arranged to fit such conditions of work.

When an employee returns to work without at a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

- Y. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal shift, and all work on Saturdays shall be paid at time and one-half the straight time rate. All work performed after 6:00 pm Saturday to 6:00 am Monday and holidays shall be paid at double the straight time rate of pay.

Any shift starting between the hours of 6:00 pm and midnight shall receive an additional one dollar (\$1.00) per hour for all hours worked that shift.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

Overtime Codes Continued

11. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

- B. After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.
- C. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, and all hours on Sunday shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage. All non-overtime and non-holiday hours worked between 4:00 pm and 5:00 am, Monday through Friday, shall be paid at a premium rate of 15% over the hourly rate of wage.
- D. All hours worked on Saturdays and holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays shall be paid at double the hourly rate of wage.
- After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.
- E. The first two (2) hours after eight (8) regular hours Monday through Friday, the first ten (10) hours on Saturday, and the first ten (10) hours worked on Holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, and Sundays shall be paid at double the hourly rate of wage.
- After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.
- F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
- On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one-half times the hourly rate of wage for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
- G. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage.
- All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.
- After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of nine (9) hours or more. When an employee returns to work without at least nine (9) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the nine (9) hours rest period.

Overtime Codes Continued

11. H. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage.

All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of ten (10) hours or more. When an employee returns to work without at least ten (10) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the ten (10) hours rest period.

- I. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay.

On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay. All work performed after 6:00 pm Saturday to 5:00 am Monday, all work performed over twelve (12) hours, and all work performed on holidays shall be paid at double the straight time rate of pay.

Any shift starting between the hours of 6:00 pm and midnight shall receive an additional two dollar (\$2.00) per hour for all hours worked that shift.

- J. All hours worked on holidays shall be paid at double the hourly rate of wage.

- K. On Monday through Friday hours worked outside 4:00 am and 5:00 pm, and the first two (2) hours after eight (8) hours worked shall be paid at one and one-half times the hourly rate. All hours worked over 10 hours per day Monday through Friday, and all hours worked on Saturdays, Sundays, and Holidays worked shall be paid at double the hourly rate of wage.

- L. An employee working outside 5:00 am and 5:00 pm shall receive an additional two dollar (\$2.00) per hour for all hours worked that shift. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.

- M. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay.

Work performed outside the normal work hours of 5:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations). When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. When due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift of 5:00 am to 6:00 pm, then a special shift may be worked at the straight time rate, plus the shift pay premium when applicable. The starting time of work will be arranged to fit such conditions of work. Such shift shall consist of eight (8) hours work for eight (8) hours pay or ten (10) hours work for ten (10) hours pay for four ten shifts.

On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay. All work performed after 6:00 pm Saturday to 5:00 am Monday, all work performed over twelve (12) hours,

Benefit Code Key – Effective 8/31/2022 thru 3/2/2023 (Updates effective on 10/22/2022)

and all work performed on holidays shall be paid at double the straight time rate of pay.

Shift Pay Premium: In an addition to any overtime already required, all hours worked between the hours of 6:00 pm and 5:00 am shall receive an additional two dollars (\$2.00) per hour.

Holiday Codes

- 5. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, and Christmas Day (7).
- B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, the day before Christmas, and Christmas Day (8).
- C. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).
- D. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8).
- H. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Day after Thanksgiving Day, And Christmas (6).
- I. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).
- J. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Eve Day, And Christmas Day (7).
- K. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9).

Holiday Codes Continued

- 6. L. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (8).
- N. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (9).
- P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday And Saturday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9). If A Holiday Falls On Sunday, The Following Monday Shall Be Considered As A Holiday.
- Q. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).
- R. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving Day, One-Half Day Before Christmas Day, And Christmas Day. (7 1/2).

Holiday Codes Continued

- S. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, And Christmas Day (7).
- Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).
- G. Paid Holidays: New Year's Day, Martin Luther King Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Christmas Eve Day (11).
- H. Paid Holidays: New Year's Day, New Year's Eve Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).
- T. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Last Working Day Before Christmas Day, And Christmas Day (9).
- Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). If a holiday falls on Saturday, the preceding Friday shall be considered as the holiday. If a holiday falls on Sunday, the following Monday shall be considered as the holiday.
- 7.
 - A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any Holiday Which Falls On A Sunday Shall Be Observed As A Holiday On The Following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
 - B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - C. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - D. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Unpaid Holidays: President's Day. Any paid holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any paid holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - E. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
 - F. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the last working day before Christmas day and Christmas day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Holiday Codes Continued

7. G. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
- H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- L. Holidays: New Year's Day, Memorial Day, Labor Day, Independence Day, Thanksgiving Day, the Last Work Day before Christmas Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. When Christmas falls on a Saturday, the preceding Friday shall be observed as a holiday.
- P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
- Q. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
- S. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, the Day after Christmas, and A Floating Holiday (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
- V. Holidays: New Year's Day, President's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, the day before or after Christmas, and the day before or after New Year's Day. If any of the above listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
- W. Holidays: New Year's Day, Day After New Year's, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day, Christmas Day, the day after Christmas, the day before New Year's Day, and a Floating Holiday.

Holiday Codes Continued

7. X. Holidays: New Year's Day, Day before or after New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day before or after Christmas day. If a holiday falls on a Saturday or on a Friday that is the normal day off, then the holiday will be taken on the last normal workday. If the holiday falls on a Monday that is the normal day off or on a Sunday, then the holiday will be taken on the next normal workday.
- Y. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day. (8) If the holiday falls on a Sunday, then the day observed by the federal government shall be considered a holiday and compensated accordingly.
- G. New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, the last scheduled workday before Christmas, and Christmas Day (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
- H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- L. Holidays: New Year's Day, Memorial Day, Labor Day, Independence Day, Thanksgiving Day, the Last Work Day before Christmas Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. When Christmas falls on a Saturday, the preceding Friday shall be observed as a holiday.
- P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
- Q. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
- S. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, the Day after Christmas, and A Floating Holiday (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

Holiday Codes Continued

7. V. Holidays: New Year's Day, President's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, the day before or after Christmas, and the day before or after New Year's Day. If any of the above listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
- W. Holidays: New Year's Day, Day After New Year's, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day, Christmas Day, the day after Christmas, the day before New Year's Day, and a Floating Holiday.
- X. Holidays: New Year's Day, Day before or after New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day before or after Christmas day. If a holiday falls on a Saturday or on a Friday that is the normal day off, then the holiday will be taken on the last normal workday. If the holiday falls on a Monday that is the normal day off or on a Sunday, then the holiday will be taken on the next normal workday.
- Y. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day. (8) If the holiday falls on a Sunday, then the day observed by the federal government shall be considered a holiday and compensated accordingly.
- Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, Christmas Eve, and Christmas Day (9). Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday. Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
15. G. New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, the last scheduled workday before Christmas, and Christmas Day (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
- H. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Eve Day, and Christmas Day (8). When the following holidays fall on a Saturday (New Year's Day, Independence Day, and Christmas Day) the preceding Friday will be considered as the holiday; should they fall on a Sunday, the following Monday shall be considered as the holiday.
- I. Holidays: New Year's Day, President's Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, the last regular workday before Christmas (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
- J. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

Note Codes

8. D. Workers working with supplied air on hazmat projects receive an additional \$1.00 per hour.
- L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$0.75, Level B: \$0.50, And Level C: \$0.25.
- M. Workers on hazmat projects receive additional hourly premiums as follows: Levels A & B: \$1.00, Levels C & D: \$0.50.
- N. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$1.00, Level B: \$0.75, Level C: \$0.50, And Level D: \$0.25.
- S. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.
- T. Effective August 31, 2012 – A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.
- U. Workers on hazmat projects receive additional hourly premiums as follows – Class A Suit: \$2.00, Class B Suit: \$1.50, And Class C Suit: \$1.00. Workers performing underground work receive an additional \$0.40 per hour for any and all work performed underground, including operating, servicing and repairing of equipment. The premium for underground work shall be paid for the entire shift worked. Workers who work suspended by a rope or cable receive an additional \$0.50 per hour. The premium for work suspended shall be paid for the entire shift worked. Workers who do “pioneer” work (break open a cut, build road, etc.) more than one hundred fifty (150) feet above grade elevation receive an additional \$0.50 per hour.
- V. In addition to the hourly wage and fringe benefits, the following depth and enclosure premiums shall be paid. The premiums are to be calculated for the maximum depth and distance into an enclosure that a diver reaches in a day. The premiums are to be paid one time for the day and are not used in calculating overtime pay.
- Depth premiums apply to depths of fifty feet or more. Over 50' to 100' - \$2.00 per foot for each foot over 50 feet. Over 101' to 150' - \$3.00 per foot for each foot over 101 feet. Over 151' to 220' - \$4.00 per foot for each foot over 220 feet. Over 221' - \$5.00 per foot for each foot over 221 feet.
- Enclosure premiums apply when divers enter enclosures (such as pipes or tunnels) where there is no vertical ascent and is measured by the distance travelled from the entrance. 25' to 300' - \$1.00 per foot from entrance. 300' to 600' - \$1.50 per foot beginning at 300'. Over 600' - \$2.00 per foot beginning at 600'.
- W. Meter Installers work on single phase 120/240V self-contained residential meters. The Lineman/Groundmen rates would apply to meters not fitting this description.

Note Codes Continued

8. X. Workers on hazmat projects receive additional hourly premiums as follows - Class A Suit: \$2.00, Class B Suit: \$1.50, Class C Suit: \$1.00, and Class D Suit: \$0.50. Special Shift Premium: Basic hourly rate plus \$2.00 per hour.
- When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications requires that work can only be performed outside the normal 5 am to 6pm shift, then the special shift premium will be applied to the basic hourly rate. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in OT or Double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)
- Y. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay.
- Swinging Stage/Boatswains Chair: Employees working on a swinging state or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents (\$0.75) per hour above the classification rate.
- Z. Workers working with supplied air on hazmat projects receive an additional \$1.00 per hour.
- Special Shift Premium: Basic hourly rate plus \$2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as a contractor), a government agency or the contract specifications require that more than (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they will be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)
9. A. Workers working with supplied air on hazmat projects receive an additional \$1.00 per hour.
- Special Shift Premium: Basic hourly rate plus \$2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications require that more than four (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)
- Certified Crane Operator Premium: Crane operators requiring certifications shall be paid \$0.50 per hour above their classification rate.
- Boom Pay Premium: All cranes including tower shall be paid as follows based on boom length:
- (A) – 130' to 199' – \$0.50 per hour over their classification rate.
(B) – 200' to 299' – \$0.80 per hour over their classification rate.
(C) – 300' and over – \$1.00 per hour over their classification rate.

Note Codes Continued

9. B. The highest pressure registered on the gauge for an accumulated time of more than fifteen (15) minutes during the shift shall be used in determining the scale paid.

Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents (\$0.75) per hour above the classification rate.

- C. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents (\$0.75) per hour above the classification rate.

Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. These classifications are only effective on or after August 31, 2012.

- D. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, bridges, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.
- E. Heavy Construction includes construction, repair, alteration or additions to the production, fabrication or manufacturing portions of industrial or manufacturing plants, hydroelectric or nuclear power plants and atomic reactor construction. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$1.00, Level B: \$0.75, Level C: \$0.50, And Level D: \$0.25.
- F. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Procedures for preparation and submittal of the Schedule of Values.

1.02 SUBMITTALS

- A. Contractor shall submit an initial Schedule of Values per the Pre-Construction Submittal Requirements of Section 01 33 00.
- B. Contractor shall submit supporting documentation justifying the amounts in the Schedule of Values if requested by Owner.

1.03 SCHEDULE OF VALUES

- A. Contractor shall submit a typed schedule on Owner's form. Once approved, Contractor shall not revise the Schedule of Values without prior approval by Owner.
- B. Format:
 1. Separate each category of Work into a separate line item.
 2. List all major Work activities indicated on the Progress Schedule.
 3. Separate floors, phases, and other easily recognized building divisions when appropriate.
 4. Separate labor, materials and equipment for each item.
 5. Identify site mobilization, demobilization, bonds, and insurance as individual line items.
 6. Include a line item for close-out Work between Substantial Completion and Final Completion.
 7. If applicable, include a line item for allowances. For unit cost allowances, give quantities measured from the Contract Documents multiplied by the unit cost.
 8. When required by Owner, include separate line items for "separately funded Work."

END OF SECTION 01 29 73

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Preconstruction Meeting;
2. Progress Meetings; and
3. Other meetings, as requested by Owner.

1.02 PRECONSTRUCTION MEETING

A. Meeting Location: Owner will schedule a meeting prior to the start of construction. The purpose of this meeting is to review Contract administration requirements and mobilization procedures. Attendance is required for the following:

1. Architect/Engineer and design Subconsultants;
2. Contractor's Superintendent and Project Manager;
3. Representative of major Subcontractors, as appropriate;
4. Others, as appropriate.

B. Owner's Designated Representative shall:

1. Preside over and conduct meeting.
2. Record, reproduce, and distribute copies of minutes within 7 Days of the meeting to all meeting participants.

C. Agenda for the meeting will include at a minimum:

1. The Work;
2. Progress Schedule, including Work sequence, phasing, and occupancy requirements;
3. Communications chain and persons authorized to direct changes;
4. Use of the Project site;
5. Special Project procedures;
6. Procedures and processing:
 - a. Application for Payments and Schedule of Values;
 - b. Contract Change Proposals (CCP), Work Directive (WD);
 - c. Change Orders (CO);

- d. Requests for Information (RFI);
- e. Submittals; and
- f. Others as appropriate.
- 7. Project Record;
- 8. Construction facilities, controls, and construction aids;
- 9. Temporary utilities;
- 10. Security procedures;
- 11. Safety and first-aid procedures;
- 12. Environmental Health and Safety;
- 13. Housekeeping procedures;
- 14. AHJ representative(s) and inspection procedures;
- 15. Utility shutdowns;
- 16. Parking;
- 17. Existing conditions;
- 18. Subcontractor list;
- 19. Emergency phone and keys to site;
- 20. Progress meeting scheduling;
- 21. Shipment and deliveries; and
- 22. Other(s) as appropriate.

1.03 PROGRESS MEETINGS

- A. Progress meetings will occur weekly.
- B. Meeting Location: Contractor's Project field office, unless otherwise agreed.
- C. Attendance: Representatives attending meetings must be qualified and authorized to act on behalf of their firms. Attendance shall include:
 - 1. Architect/Engineer and Subconsultants, as appropriate;
 - 2. Owner's Designated Representatives;
 - 3. Contractor's Superintendent and Project Manager;
 - 4. Subcontractors, as appropriate;
 - 5. Suppliers, as appropriate; and
 - 6. Others, as appropriate.
- D. Owner's Designated Representative shall:

1. Administer progress and other specially scheduled meetings;
 2. Record, reproduce, and distribute copies of minutes within 6 Days of meeting to all meeting participants; and
- E. Contractor shall, at each meeting, provide each meeting attendant with:
1. Short-interval (look-ahead) schedule coordinated with the Progress Schedule;
 2. Updated Progress Schedule, if appropriate;
 3. Updated submittal log and schedules;
 4. Updated RFI log;
 5. Issues Log;
 6. Quality Control Log; and
 7. Any applicable tracking mechanisms.
- F. Agenda for these meetings will include at a minimum:
1. Project safety;
 2. Review and approval of minutes from previous meeting;
 3. Review Work progress since previous meeting;
 4. Review plans for progress for subsequent Work period and short-interval (look-ahead) schedule;
 5. Review Progress Schedule;
 6. Present corrective measures and procedures to regain Progress Schedule, as applicable;
 7. Present field observations, problems, and conflicts;
 8. Discuss RFIs;
 9. Review quality control;
 10. Review submittal log and schedules and present methods to expedite as required;
 11. Review off-site fabrication;
 12. Review delivery schedules;
 13. Review coordination issues;
 14. Review proposed changes for:
 - a. Effect on Progress Schedule and on completion date.
 - b. Effect on any other contracts of the Project.
 15. Review Issues Log;

16. Review draft Application for Payment (at end of month);
17. Review Project Record; and
18. Review any other issues.

1.04 OTHER MEETINGS

- A. Owner may call additional Project meetings as appropriate.
- B. Meetings as required by other sections.
- C. Format and agenda of these meetings will follow that of Progress Meetings unless Owner determines otherwise.

END OF SECTION 01 31 19

PART 1 GENERAL

1.01 GENERAL COMMUNICATION

- A. Subcontractors: Informal communication between Owner, Owner's consultants, and other Subcontractors is permitted. If written clarification or direction is required to resolve questions, transmit questions in writing using a Request for Information (RFI) through the Contractor to Owner.
- B. In case of an EMERGENCY, dial 9-1-1 if appropriate; otherwise, contact Owner's Designated Representative. If he or she is not available contact Facilities Services, Capital at 509-335-9000.

1.02 CORRESPONDENCE

- A. Address all correspondence to Owner's Designated Representative.
- B. Contractor shall copy Architect/Engineer on all correspondence to and from Owner.
- C. Include Project title and Owner Project number on all correspondence.

1.03 REQUEST FOR INFORMATION

- A. When field conditions or Contract Document require clarification, a written Request for Information (RFI) must be submitted per the following:
 - 1. Identify the nature and location of each clarification/verification using a RFI form and provide at least the following information:
 - a. Project name and number;
 - b. Date;
 - c. Date response requested;
 - d. RFI number;
 - e. Subject;
 - f. Initiator of the question;
 - g. Indication of costs;
 - h. Indication of schedule impact;
 - i. Location on site;
 - j. Contract Drawing reference;
 - k. Contract Specification section and paragraph reference;
 - l. Descriptive text;
 - m. Recommended solution(s); and

- n. Space for reply on same page as questions.
- B. Each RFI must be limited to a single issue, but shall reference other related RFI's.
- C. Route and copy RFIs in same manner as correspondence.
- D. Allow a minimum of 14 Days for Owner response to RFI.

1.04 NONCONFORMANCE REPORT

- A. Reference Document: Owner Nonconformance Report (NCR).
- B. Procedure: If Contractor proceeds to install deficient Work or fails to correct Work that in the opinion of Owner fails to conform to the Contract Documents, an NCR may be issued. Upon receipt of a NCR, Contractor shall take immediate action to correct nonconforming Work. Correction of nonconforming Work will be reviewed at progress meetings.

1.05 COORDINATION

- A. Special Coordination: Contractor shall:
 - 1. Provide a traffic management plan for vehicular traffic on Stadium Way, SR 270 and Bishop Boulevard. Plan will need to be reviewed and approved by WSU, City of Pullman, and WSDOT prior to the start of work.
 - 2. Provide alternative paths for pedestrians and bicyclists for the duration of the project. This plan will need to be reviewed and approved by WSU and City of Pullman prior to the start of work.
 - 3. Any signage that will be placed on WSDOT Right of Way outside of the City or University jurisdiction will need a General Permit as shown on Attachment B at the end of Section 32 in the technical specification.
 - 4. Trees to remain on site and other existing plants to remain must be protected during the project.
 - 5. The WSU Gateway wall and associated infrastructure must NOT be impacted by the construction.
- B. General Coordination: Contractor shall:
 - 1. Coordinate with Work of other sections to ensure that all fixtures, devices, switches, outlets, ducts, pipes, and similar items can be installed as shown without modifications to framing. Provide all blockouts, raceways and similar framing, as required;
 - 2. Coordinate the Work and not delegate responsibility for coordination to any Subcontractor. Contractor must make available to each

Subcontractor, prior to the execution of each Subcontract, copies of the Contract Documents to which the Subcontractor will be bound. Subcontractor will similarly make copies of the Contract Documents available to their respective lower-tier Subcontractors. Contractor must provide Owner copies of the written agreements between Contractor and any Subcontractor upon request;

3. Anticipate interrelationship of all Subcontractors and their relationship with the total Work;
4. Resolve differences or disputes between Subcontractors and materials suppliers concerning coordination, interference, or extent of Work between sections;
5. Be in charge of and responsible for the Work and the Project site, including directing and scheduling all Work; and
6. Cooperate with Separate Contractors. Work by others may be occurring within the building or at locations adjacent or near to the Project site. Contractor must cooperate with all such work.

C. Mechanical and Electrical Coordination: Contractor shall:

1. Resolve all "tight", restricted, or inaccessible areas involving Work of various disciplines in advance of installation.
2. If necessary, and before Work proceeds in these areas, prepare coordination drawings for review showing all Work in "tight", restricted, or inaccessible areas.
3. Provide coordination drawings necessary to resolve "tight", restricted, or inaccessible areas, at no increase in Contract Sum.

D. Job Site Field Measurements and Templates: Contractor shall:

1. Obtain field measurements required for accurate fabrication and installation of Work. Exact measurements are Contractor's responsibility.
2. Furnish or obtain templates, patterns, and setting instructions as required for installation of all Work. Contractor shall verify in field, as needed.

END OF SECTION 01 31 23

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies the administrative and procedural requirements to comply with the requirements of the General Conditions regarding preparation of Contractor's Progress Schedules, monthly update to the Progress Schedules, and other schedules as specified herein. The purposes of these schedules and reports are to:
 - 1. Ensure adequate planning and execution of the Work by Contractor;
 - 2. Establish a standard against which progress of the Work can be tracked;
 - 3. Assist in monitoring progress;
 - 4. Evaluate the impact of any changes to the Contract; and
 - 5. Support the basis for progress payments.
- B. All schedule submittals including updated Progress Schedules will be reviewed by Owner for compliance with Contract terms and the needs of the University. Review of any schedule does not constitute approval or acceptance of Contractor's construction means, methods, or sequencing, or an assessment by Owner of Contractor's ability to complete the Work within the Contract Time.

1.02 WORK INCLUDED

- A. Contractor shall submit a preliminary Progress Schedule, as required by the Pre-Construction Submittal Requirements of Section 01 33 00.
- B. Contractor shall prepare and submit Progress Schedules and reports as required by this Section. NOTE: Processing and payment of the second Application for Payment is contingent upon receipt, review, and subsequent acceptance of the updated Progress Schedule.
- C. Contractor shall participate in monthly scheduling meetings and provide updated Progress Schedules as required by this Section.
- D. Contractor shall perform Contemporaneous Period Analysis (CPA) of any delays associated with the critical path schedule as required by this Section.
- E. Contractor shall provide weekly Short-Interval (look-ahead) schedules as required by this Section.
- F. Contractor shall submit a Submittal Schedule as required by this Section.

1.03 PRELIMINARY PROGRESS SCHEDULE

- A. Contractor shall submit a preliminary Progress Schedule as part of the Pre-

Construction Submittal Requirements in Section 01 33 00 - Submittals. The schedule shall include activity description, activity start and end dates. The schedule shall emphasize milestone dates and date of Substantial Completion. Schedule shall clearly identify the critical path schedule elements.

- B. Progress Schedule shall be in Bar Chart format.
- C. Schedule activities longer than 14 days shall be sufficiently detailed.
- D. Participate in schedule update meetings and provide updated Progress Schedules.

1.04 CONTRACTOR'S PROGRESS SCHEDULE

- A. Within three calendar days of receiving WSU comments on the preliminary Progress (Bar Chart) Schedule, the Contractor shall prepare and submit a detailed Progress (Bar Chart) Schedule. This schedule shall be the Contractor's as-planned schedule and shall be used to plan, organize, and execute the Work, record and report actual performance and progress through updates, as well as show how the Contractor plans to complete all remaining Work. The accepted Contractor's Progress (Bar Chart) Schedule and subsequent updates shall be the basis for consideration and analysis of requests for time extensions.
- B. Updates:
 - 1. The Contractor is required to prepare and submit an updated Progress (Bar Chart) Schedule as agreed upon at the Pre-construction Meeting.
 - 2. The Contractor and Owner's Designated Representative will review the updated schedule and will discuss any differences or issues raised. Decisions made and agreed to by all parties are binding. However, no contracted completion dates will be modified except by an approved Contract Change Proposal and subsequent Change Order.
 - 3. Timely submission of updates is of significant and crucial importance to the management of this Project. Lack of or late receipt of updates diminishes their value to the Project. Therefore, at the Owner's Designated Representative discretion, partial payment may be withheld for a late update as may be determined by the Owner's Designated Representative in consideration of the value of the update at the time of receipt, the circumstances of the late submittal, and the level of progress achieved on the Project.
- C. The Contractor shall submit the Progress Schedule, consisting of the reports and diagrams as specified by this subsection, in the following formats quantities:
 - 1. Electronic PDF file of all reports, schedules, etc.
 - 2. Native electronic copy of the CPM Progress Schedule.
- D. Float: Contractor is not entitled to any adjustment in the Contract Time or the Contract Sum, or to any additional payment or equitable adjustment of any sort,

by reason of the loss or the use of any float time, including time between Contractor's anticipated completion date and the end of the Contract Time, whether or not the float time is described as such on the Progress Schedule.

- E. Qualifications: Contractor shall submit the resume(s) of the person(s) designated as responsible for schedules and reports (the Contractor's scheduler) Prior to commencing construction activities. Contractor's scheduler shall have demonstrable capability to plan, coordinate, execute, and monitor a CPM schedule as required for this Project. Owner's Designated Representative will approve or disapprove the Contractor's proposed scheduler. In the event of disapproval, a new scheduler shall be proposed within 7 Days and be subject to the same consideration criteria as noted above.

1.05 MONTHLY UPDATES

- A. Contractor shall prepare and submit updated Progress Schedules and participate in schedule update meetings with the Owner each month. Participation in the meeting and submission of the monthly update is a condition precedent for payment of the line item value for scheduling Work.
 - 1. Updated monthly schedule submittals:
 - a. A PDF electronic version of complete Project schedule showing the critical path accompanied by a narrative of any deviations from the previous month.
 - b. Electronic schedule file in native format.
 - c. Short-interval schedules or look-ahead schedules shall not be an acceptable submittal.
- B. Contractor shall prepare an update of the current Progress Schedule each month to reflect Work progress achieved since the previous update. Progress updating shall be performed without changes to the schedule logic or the original duration of activities. Monthly progress updating is required and necessary prior to performing a Contemporaneous Period Analysis of any change to the calculated completion date from the prior update.
- C. Contractor may, in a second report, incorporate any logic and duration changes that represent revised planning. All such changes must be clearly identified and submitted for acceptance.
- D. The Progress Schedule must clearly identify the current Substantial and Final Completion dates.
- E. Contractor shall account for all adverse weather days and similar excusable noncompensable delays. By whatever method Contractor chooses to account for such delays and events, a narrative description and CPA of the accounting shall be included with the narrative report.
- F. Monthly schedule update meetings:
 - 1. Monthly schedule update meetings shall be held at Contractor's Project

- field office one week prior to the due date of Contractor's monthly Application for Payment, unless otherwise agreed.
2. The Contractor shall provide updated Project schedule submittals.
 3. The Contractor shall also provide a narrative report including:
 - a. A description of the Work accomplished during the preceding period;
 - b. A discussion of the Work that had been scheduled to be performed during the previous period but was not, and explain why it was not performed; and
 - c. A discussion of the Work scheduled for the upcoming period noting any issues or events that could impact this Work. If Contractor intends to make logic or original activity duration changes, the report must specifically identify such changes.
 4. Contractor, Owner, and Architect/Engineer will review these reports and will discuss any differences or issues raised. No contractual completion dates will be modified except by approved Change Order.
- G. Timely submission of updates is of significant and crucial importance to the Project. Owner may withhold payment as per Section 01 29 00 Applications for Payment.

1.06 THE CONTEMPORANEOUS PERIOD ANALYSIS

- A. It is Owner's intent to resolve all issues affecting the Contract completion date in a timely, efficient and effective manner. To achieve this goal, and in addition to contractor's obligation to follow the contractual dispute resolution procedure, Contractor shall analyze any delays to the critical path or completion date by application of the Contemporaneous Period Analysis method. A CPA shall normally coincide with the monthly schedule update meetings.
- B. Assessment of impacts due to changes or other events, in accordance with the CPA method, must be based on the most recent accepted updated Progress Schedule. No logic or duration changes shall be made to updates until progress related data has been incorporated into the Progress Schedule and the Progress Schedule is updated to reflect actual progress for the period. All data shall be provided to Owner.
- C. Submission of an accurate and properly updated Progress Schedule and completion of the Contemporaneous Period Analysis are conditions precedent to the review and approval of any request for an extension in the Contract Time. Owner may assess liquidated damages, if any, regardless of the status of any requests for time extensions pending, until any such requests are resolved.
- D. The process for preparing and submitting a CPA is as follows:
 1. Contractor will notify Owner in writing of event(s) or occurrence(s) which constitute a delay of the critical path or completion date affecting progress

- of the Work.
2. Contractor shall evaluate the event(s) or occurrence(s) and produce a narrative of the resulting delay describing the effect upon concurrent or logically connected subsequent activities.
 3. Consistent with the narrative, Contractor shall produce a subnet to graphically describe the event(s) or occurrence(s) and the effect upon the Progress Schedule.
 4. Contractor will recalculate the Progress Schedule and provide an updated PDF and Native Progress Schedule.
- E. The CPA will be reviewed at the monthly schedule update meeting or at a special meeting scheduled with Owner. At the CPA review meeting, Contractor shall present the CPA and respond to questions.
- F. Until and unless substantiated delay is accepted by Owner, the time effect shall not be incorporated into any monthly update. If accepted after a monthly update in which the event(s) or occurrence(s) took place, that monthly update may be recalculated, resubmitted and shall be included in an approved Change Order.

1.07 SHORT-INTERVAL SCHEDULE

- A. Prepare a weekly Short-Interval (look-ahead) Schedule based upon the Contractor's Work plan and the updated Progress Schedule.
- B. Format for the Short-Interval (look-ahead) Schedule shall be acceptable to Owner. The format shall include comment annotation as necessary.
- C. Content of the Short-Interval (look-ahead) Schedule shall include the Work planned for the next 3-week period and the Work that was performed in the previous week.
- D. Copies of the Short-Interval (look-ahead) Schedule shall be provided at the weekly progress meetings to be used as a basis for discussion of progress and of planned Work.

1.08 SUBMITTAL SCHEDULE

- A. Provide a Submittal Schedule within 10 Days of Owner's Acceptance of the Project Schedule per Section 01 33 00 - Submittals.

PART 2 PRODUCTS

2.01 SCHEDULING SOFTWARE

- A. Contractor shall utilize Microsoft Project or Primavera P6 unless otherwise agreed to by Owner.

- B. Contractor shall provide a licensed and royalty pre-paid copy of the mutually agreed upon scheduling software. The selected software must be capable of performing target-to-current schedule comparisons, cost and resource loading functions and have the option of executing calculations in retained logic. Activities must be able to process lead and lag time relationships, start-to-finish or finish-to-finish relationships, and be capable of being hammocked, if required. The software must be registered with Owner and be provided in a format compatible with Owner's systems.

END OF SECTION 01 32 13

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preconstruction photography.
- B. Construction photography of Work-in-progress.

1.02 GENERAL

- A. Contractor shall provide photographs taken from locations coordinated with Owner.
- B. Photographer: Experienced in taking construction photography.
- C. Equipment: All photos shall be in digital format.
- D. Video images may be acceptable for certain operations. Confirm with Owner.

PART 2 PRODUCTS

2.01 PRECONSTRUCTION PHOTOGRAPHS

- A. Contractor shall provide electronic files containing photographs of the existing conditions at the site, surroundings, and haul routes per the Pre-Construction Submittal Requirements of Section 01 33 00. Coordinate with Owner the extent of the preconstruction photographic record that is required.

2.02 CONSTRUCTION PHOTOGRAPHS

- A. Contractor shall provide electronic files containing photographs of construction progress on a monthly basis.

2.03 PHOTOGRAPHIC SUBMITTALS

- A. Photographs shall be submitted each month during the Contract Time, or as otherwise agreed upon by Owner. The number of photographs shall be sufficient to document the site to the satisfaction of the Owner and Contractor.
- B. Photographs shall be representative of Project progress, showing all major Work and any critical concealed conditions.
- C. The files in each monthly photograph submittal must each be labeled with the Project name, Project number, and submittal date. Additionally, each photograph shall be dated, labeled, and accompanied by a brief description identifying the location and direction the photo was taken. Date stamp using month/date/year format.

PART 3 EXECUTION

3.01 PRECONSTRUCTION PHOTOGRAPHS

- A. Coordinate the scope of preconstruction photographic record survey with Owner.
- B. Take preconstruction photographs to identify and establish a baseline record of existing conditions.
- C. A preconstruction photographic record survey shall include, but not be limited to, all areas that may be impacted or damaged by construction phase activities.
- D. The extent or nature of the existing site and adjacent surroundings shall be thoroughly documented.

3.02 CONSTRUCTION PHOTOGRAPHS

- A. Contractor shall take construction photographs each month during construction of the Project.
- B. Contractor shall document concealed conditions (once exposed) that differ from expectations.
 - 1. It is critical that Contractor photographically document concealed conditions that may benefit Owner's future maintenance and operations activities. Take photographs (with a reference point) prior to cover or concealment. For example:
 - a. Underground pipe arrangements/valves/structures.
 - b. Under-slab utility rough-in.
 - c. Wall cavity utility routing.
 - d. Above-ceiling installation after ceiling support system installed, but prior to cover.
 - 2. The photograph record described above shall be considered minimum and shall not be deemed to limit the quantity or quality of the photographic record.

END OF SECTION 01 32 33

PART 1 GENERAL

1.01 SUMMARY

- A. This section includes administrative and procedural requirements for submittals required for performance of the Work, including:
 - 1. Pre-Construction Submittal Requirements;
 - 2. Shop Drawings;
 - 3. Product data;
 - 4. Samples; and
 - 5. Mock-ups.

1.02 SUBMITTAL PROCEDURES

- A. Provide submittal schedule as required by Section 01 32 13 – Progress Schedule. The Submittal Schedule shall meet all of the requirements below.
- B. Coordination: Review of the submittals by Owner is not for the purpose of determining their accuracy and/or completeness, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of Contractor as required by the Contract Documents.
 - 1. Owner reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are provided.
 - 2. Allow at least 14 Days for review of each submittal by Owner. Complex or interrelated submittals, or the submission of multiple submittals at or near the same time, will require additional time. Provide a "priority list" when submitting multiple submittals at or near the same time. Submittal sequencing should coincide with the submittal schedule (see Section 01 32 13 – Progress Schedule).
- C. Submittal Preparation: Place a permanent label or title block on each submittal for identification.
 - 1. Include the following information on the label or title block:
 - a. Project name, Project number, and date;
 - b. Name and address of Owner;
 - c. Name and address of Contractor and submitting Subcontractor, if applicable;
 - d. Name and address of supplier and manufacturer, if applicable;
 - e. Number and title of appropriate Specification section; and
 - f. Drawing number and detail references, as appropriate.

2. Provide adequate space for action stamps to record review.
- D. Submittal Transmittal: Package submittals in manageable quantities and transmit to Owner and Architect/Engineer, if applicable, simultaneously. Submittals received from sources other than Contractor will be returned without action. By submitting submittals, Contractor represents to Owner that Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements, and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within each submittal with the requirements of the Work and of the Contract Documents.
1. Address one topic or related set of topics in each transmittal based upon Specification sections (i.e., mechanical items should not be submitted under same transmittal with electrical items).
 2. Clearly call out relevant information, deviations, and requests for data, including minor variations from the Contract Documents on both the transmittal and all copies of a submittal.
 3. Shop drawings, product data, samples, and mock-ups shall be submitted to Owner's Designated Representative for review/approval. The minimum number of submittals to be provided are:
 - a. Pre-Construction, Shop Drawings, Product Data: Electronic copies.
 - b. Samples: As required by the technical Specification section.
 - c. Mock-ups: As required by the technical Specification section.
 - d. Demonstrations: As required to facilitate installation and inspection.
 - e. Reference technical Specifications for additional submittal requirements.
 4. Owner may modify the required submittal quantities.
- E. Material and Color Submittal: Submit samples of actual colors and/or materials.
- F. Number submittals by Specification section number and revision letter.
- G. In the event of the need to "revise and resubmit" a submittal, resubmit same in acceptable form/content, clearly identifying deviations from the previous rejected submittal. Contractor shall also keep accurate records of the receipt, review, and delivery of all submittals and shall submit to Owner, as requested, status reports.
- H. Provide a final electronic copy of all approved submittals.

1.03 PRE-CONSTRUCTION SUBMITTAL REQUIREMENTS

- A. All Pre-Construction Submittals are required before onsite construction activities may commence. Contractor shall submit the following Pre-

Construction Submittals within 10 days of Notice to Proceed. Submittal review for these items only shall be supplied within 7 days of receipt by Owner.

1. Indoor Air Quality Management Plan
2. Site Safety and Health Plan (for information only)
3. Quality Control / Quality Assurance Plan
4. Waste Management Plan
5. Progress Schedule
6. Schedule of Values
7. Pre-Construction Photographs
8. Emergency Points of Contact
9. List of Subs and Suppliers
10. SWPP (Storm Water Pollution Prevention Plan)
11. Demolition Plan
12. Traffic Control Plan
13. List of Long Lead Items

1.04 SHOP DRAWINGS

- A. Submit Shop Drawings drawn to accurate scale. Do not reproduce Contract Documents or copy standard information for use as Shop Drawings. Standard information prepared without specific references to the Project will not be accepted as a Shop Drawing.
- B. Shop Drawings Include: fabrication and installation drawings, setting diagrams, schedules, patterns, templates, and similar drawings. Include the following information:
 1. Dimensions;
 2. Products and materials;
 3. Compliance with specified standards;
 4. Coordination requirements;
 5. Notation of dimensions established by field measurements;
 6. Any deviation from Drawings or Specifications; and
 7. Date when review is requested to maintain Progress Schedule.

1.05 PRODUCT DATA

- A. Product data includes: Manufacturer's printed installation instructions, catalog cuts, standard color charts, rough-in diagrams and templates, standard wiring diagrams, and performance curves.
 1. Where product data must be specially prepared because standard printed data is not suitable, the submittal must be provided as a Shop Drawing.

- B. Requirements: Mark each copy to show applicable options. Include the following information:
 - 1. Manufacturer's printed recommendations;
 - 2. Compliance with recognized trade-association standards;
 - 3. Compliance with recognized testing-agency standards;
 - 4. Application of testing-agency labels and seals;
 - 5. Notation of dimensions verified by field measurement;
 - 6. Notation of coordination requirements;
 - 7. Any deviation from Drawings or Specifications; and
 - 8. Date when review requested to maintain Progress Schedule.

1.06 SAMPLES AND MOCK-UPS

- A. Submit samples and mock-ups that are identical to the material or product proposed. Samples include partial sections of components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.
 - 1. Package samples to facilitate review. Include the following:
 - a. Generic description of the sample;
 - b. Source;
 - c. Product name or name of manufacturer;
 - d. Compliance with recognized standards;
 - e. Availability and delivery time; and
 - f. Specification section.
- B. Requirements: Submit samples and mock-ups for review of kind, color, pattern, and texture for a comparison of these characteristics before actual installation.
 - 1. Where variation in color, pattern, texture or other characteristics are inherent in the material, submit not less than four units to show limits of variation.
- C. Submittals: Where samples are for selection of appearance from a range of standard choices, submit a full set of choices for the material or products.
- D. Maintain sets of approved samples and mock-ups at the Project site for quality comparisons throughout the course of construction.
- E. Demolish and remove all samples and mock-ups prior to Substantial Completion but not sooner than directed by Owner.

1.07 OWNER's ACTION

- A. Review: Except for submittals for information or a similar purpose, Owner will review each submittal, mark to indicate action taken, and return promptly.

- B. Owner approval of submittals does not supersede or alter Contract Document requirements.

END OF SECTION 01 33 00

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes the administrative and procedural requirements for any general alterations to be performed during the Project, including but not limited to products, transition and adjustments, cutting, patching, and repair and cleaning.

1.02 SUBMITTALS

- A. Contractor shall submit a written request in advance of cutting or alteration that impacts:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety of any operational elements.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or a separate contractor.
- B. Contractor must include in its written request, when required:
 - 1. Identification of Project.
 - 2. Location and description of affected Work.
 - 3. Necessity for cutting or alteration.
 - 4. Description of proposed Work and products to be used.
 - 5. Alternatives to cutting and patching.
 - 6. Effect on Work of Owner or separate contractor.
 - 7. Written permission of affected separate contractor.
 - 8. Date and time Work will be executed.

1.03 QUALITY ASSURANCE

- A. Limits of Work:
 - 1. Contractor shall maintain existing building structure (including structural floor and roof decking) and envelope (exterior skin and framing, excluding window assemblies and nonstructural roofing material) not indicated to be removed; do not cut such existing conditions beyond indicated limits.
 - 2. Contractor shall maintain existing interior nonstructural elements (interior walls, doors, floor coverings, and ceiling systems) not indicated to be removed; do not cut such existing conditions beyond indicated limits.
 - 3. Contractor shall maintain existing nonshell, nonstructural components (walls, flooring, and ceilings) not indicated to be removed; do not cut such existing conditions beyond indicated limits.

- B. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- C. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:
 - 1. Primary operational systems and equipment.
 - 2. Air or smoke barriers.
 - 3. Fire-suppression systems.
 - 4. Mechanical systems piping and ducts.
 - 5. Control systems.
 - 6. Communication systems.
 - 7. Conveying systems.
 - 8. Electrical wiring systems.
 - 9. All low voltage systems.
 - 10. Operating systems of special construction in Division 13.
 - 11. Other operating systems as appropriate.
- D. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended that result in increased maintenance or decreased operational life or void of warranty, or could adversely affect safety. Miscellaneous elements include the following:
 - 1. Water, moisture, or vapor barriers.
 - 2. Firestopping or fire barriers.
 - 3. Membranes and flashings.
 - 4. Exterior curtain-wall construction.
 - 5. Equipment supports.
 - 6. Piping, ductwork, vessels, and equipment.
 - 7. Noise and vibration-control elements and systems.
 - 8. Other miscellaneous systems as appropriate.
- E. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exterior conditions or in occupied spaces in a manner that would, in Owner's opinion, reduce the building's aesthetic qualities. Contractor shall remove and replace conditions that have been cut and patched in a visually unsatisfactory manner.

PART 2 PRODUCTS

2.01 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials: Match existing products and Work when patching and extending Work.

- B. Type and Quality of Existing Products: Determine by inspection and testing products where necessary; refer to existing Work as a standard.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents related to that portion of the Work, as well as other information available to Contractor, take field measurements, and inspect any existing conditions, including elements subject to damage or movement during cutting and patching.
- B. After uncovering existing Work, inspect conditions affecting performance of Work.
- C. By beginning any cutting or patching, Contractor represents and warrants its acceptance of existing conditions.
- D. Contractor shall verify that demolition is complete and areas are ready for installation of new Work.

3.02 PREPARATION

- A. Contractor shall cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- B. Contractor shall remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, deteriorated masonry, concrete, and disturbed subgrade material. Replace materials as specified for finished Work.
- C. Contractor shall remove debris and abandoned items from area and from concealed spaces.
- D. Contractor shall prepare surface and remove surface finishes to provide for proper installation of new Work and finishes.
- E. Contractor shall close openings in exterior surfaces to protect existing Work. Contractor shall insulate ductwork and piping to prevent moisture and condensation in exposed areas.
- F. Contractor shall provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect Work from damage.

3.03 PERFORMANCE

- A. Contractor shall coordinate alterations and renovations to expedite completion of the Work.

- B. Remove, cut, and patch Work in a manner to minimize damage. Provide a means of restoring products and finishes to their original or specified condition.
- C. Refinish remaining existing surfaces in renovated rooms and spaces, to specified condition for each material, with a neat and clean transition to adjacent finishes.
- D. In addition to specified replacement of equipment and fixtures, restore existing plumbing, heating, ventilation, air conditioning, and electrical systems to full original operational condition.
- E. Install products as specified in individual sections.
- F. Remove samples of installed Work for testing when requested.
- G. Provide openings in the Work for penetration of mechanical and electrical Work.
- H. Cut rigid materials using the appropriate equipment and tool. Pneumatic tools not allowed without prior approval.
 - 1. Concrete Walls: Saw-cut walls using accurately located straight lines, unless directed otherwise. Minimize overcuts.
 - 2. Masonry Walls: Saw-cut along mortar joints, cutting block uniformly in accurately located straight lines, unless otherwise directed. Remove all mortar adhering to edges. Overcuts not allowed.
 - 3. Wood Framed Walls: Demolish plaster or gypsum wallboard, removing wall framing only as required. Cut wall finish materials in straight uniform lines.
 - 4. Concrete Floors: Saw-cut floors and remove. Core drill as required.
- I. Restore Work with new products in accordance with requirements of Contract Documents.
- J. Fit Work to existing pipes, sleeves, ducts, conduit, and other penetrations through surfaces, while maintaining assemblies.
- K. At penetrations of fire rated walls, partitions, ceilings, or floors, completely seal voids with firestopping material to full thickness of the penetrated element, while maintaining assemblies.
- L. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 01 35 16

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements pertaining to regulatory requirements.
- B. List of regulatory requirements.

1.02 CONTRACTOR RESPONSIBILITY

- A. Contractor is solely responsible for compliance with all codes, laws, or regulatory requirements.
- B. Inspections performed or not performed by the City of Pullman, Labor and Industries, Owner, Owner Designated Representative, or others who are under contract to Owner do not waive or change Contractor's obligations, nor do such inspections constitute approval or acceptance of portions of the Work.

1.03 CONTRACTOR REQUIREMENTS

- A. Contractor shall perform the Work in accordance with the requirements of governing agencies and applicable regulatory requirements, including those included in this Section and elsewhere in the Contract Documents. Contractor must comply with all applicable laws, building codes, regulations, and rules, including, when applicable, the Washington State University campus code.
- B. Contractor shall schedule and coordinate inspections and gain approvals required by the City of Pullman and other governing agencies in a timely manner and as required for Owner occupancy of the Project within the Contract Time.
- C. Contractor shall inform the City of Pullman Building and Fire Departments, Labor and Industries, and other governing agencies of changes in the Work affecting regulatory requirements in a timely manner.
- D. Contractor shall promptly forward to Owner all inspection reports, orders, permits, and other directives and correspondence received from the City of Pullman inspectors or other governing agencies having jurisdiction over the Work.
- E. Contractor shall promptly notify Owner when the Contract Documents appear to be in conflict with Regulatory Requirements.
- F. Contractor shall, at all times, use its best efforts and exercise its judgment as an experienced contractor to adopt and implement policies and practices designed to avoid work stoppages, slowdowns, disputes, or strikes where reasonably possible and practical under the circumstances, and shall, at all times, maintain Project-wide labor harmony.

1.04 REGULATORY REQUIREMENTS

- A. Authority Having Jurisdiction (AHJ) shall be the organization, office, or individual responsible for enforcing the requirements of the applicable code(s) or standard(s), and or for approving equipment, materials, installation(s), or procedure(s).
- B. Regulatory authorities establish minimum requirement levels. Where provisions of the Contract Documents and regulatory requirements differ or conflict, the more stringent requirement governs.
- C. Regulatory requirements added by other sections of the Contract Documents or otherwise applicable are binding upon the Work in accordance with the provisions of this Section. The regulatory-requirements list provided below is intended to assist Contractor in determining the regulatory requirements for the Project, but neither the inclusion nor omission of any item from the list shall be construed to relieve Contractor of obligations that otherwise exist under the law or the Contract.

1.05 LIST OF REGULATORY REQUIREMENTS

- A. International Building Code (IBC), current adopted edition.
- B. International Fire Code (IFC), current adopted edition.
- C. National Fire Protection Association (NFPA) Codes.
- D. American Society of Mechanical Engineers (ASME), ASME A17.1 Safety Code for Elevators and Escalators, current adopted edition.
- E. American Society of Mechanical Engineers (ASME), ASME A18.1 Safety Standard for Platform Lifts and Stairway Chairlifts, current adopted edition.
- F. State of Washington, WAC-51-50-1101, Accessibility, as adopted by the State of Washington.
- G. International Code Council (ICC)/American National Standards Institute (ANSI) A117.1 Accessible and Usable Buildings and Facilities, current adopted edition.
- H. State of Washington, WAC Chapters 173, 246, and 296, as applicable.
- I. U.S. Environmental Protection Agency 40 CFR, as applicable.
- J. U.S. Transportation Department Title 49, Parts Pertaining to Transportation of Hazardous Materials.
- K. U.S. Nuclear Regulatory Commission Title 10, Parts Pertaining To Radioactive Materials Management.
- L. Washington State Ventilation and Indoor Air Quality Code, WAC 51-13.

- M. Washington State Energy Code, WAC 51-11C. Shortened
- N. Mechanical Work: International Mechanical Code (IMC), current adopted edition.
- O. Plumbing Work: Uniform Plumbing Code (UPC) as amended and adopted by the State of Washington, in the Washington Administrative Code (WAC).
- P. Federal Emergency Management Agency (FEMA) requirements for floodway/floodplain development.
- Q. Electrical Work:
 - 1. NFPA 70, National Electrical Code (NEC), most recent adopted edition.
 - 2. Underwriters' Laboratories (UL).
 - 3. National Electrical Manufacturer's Association (NEMA).
 - 4. National Electric Safety Code (NESC).

1.06 PERMITS REQUIRED

- A. Contractor shall obtain and pay for all required building permits, including any renewals. Contractor shall identify costs for permits on the Schedule of Values for permits obtained.
- B. All trade permits (e.g. electrical, pressure vessel, elevator, etc.) must be included in each Subcontractor bid.
- C. Owner obtains permits for the following facilities and activities.
 - 1. U.S. Army Corps of Engineers:
 - a. Wetlands (404).
 - 2. Permits and/or Approvals from the DOE or local environmental authority:
 - a. Stormwater from Construction Sites (Notice of Intent).
 - b. Wastewater Discharge Facilities.
 - c. Well Construction (including Well Abandonment).
 - d. Water Rights.
 - e. Notice of Construction (Air Pollution Sources).
 - f. SEPA.
 - g. Floodway/Floodplain development.

END OF SECTION 01 41 00

PART 1 GENERAL

1.01 SUMMARY

- A. Conduct portions of the Work requiring special procedures due to hazardous materials and conditions in accordance with regulatory standards and guidance provided in this Section.

1.02 SUBMITTALS

- A. Contractor shall deliver a current copy of its site specific Health and Safety Plan to the Owner per the Pre-Construction Submittal Requirements of Section 01 33 00. The submittal must include each Subcontractor's site specific Health and Safety Plan. Submittal to Owner is for information only, not for review, acceptance, or approval of the Health and Safety Plan, nor for analysis of content or completeness.

1.03 QUALIFICATIONS OF HEALTH AND SAFETY PERSONNEL

- A. Contractor shall employ a competent person for each hazardous construction task in accordance with the requirements of WAC 296-155.
- B. Contractor shall submit to Owner the names of its employees performing duties as competent persons, as well as the names of Subcontractor employees performing duties as competent persons.

1.04 HAZARDOUS MATERIALS MANAGEMENT

- A. Dangerous Waste Management:
 - 1. Contractor agrees and acknowledges that:
 - a. Contractor has direct and exclusive control over the Work and operations at the Project site and is responsible for any Contractor generated, created, or disturbed Washington State dangerous waste and its collection, labeling, accumulation, transportation, and disposal. Owner's EH&S department will provide assistance to Contractor upon request, and will coordinate transportation and disposal of Project-generated Washington State dangerous waste.
 - b. Contractor must provide Owner immediate notification of any pre-existing unanticipated Washington State dangerous waste or site contamination.
 - 2. Contractor is responsible for securing its own waste generator identification number, and Contractor shall sign all manifests associated with the Contractor-generated waste.
 - a. Contractor shall obtain an EPA/State ID number in accordance with WAC 173-303-360 before conducting activities generating chemical waste designated as Washington State dangerous waste.

- b. Contractor shall cancel the EPA/State ID number when:
 - 1) All activities generating or managing waste have ceased;
 - 2) All regulated wastes have been removed from the Project site under proper manifests, and all site contamination is remediated; and
 - 3) All annual dangerous-waste reporting requirements are complete.
 - c. Contractor may call the Washington State Department of Ecology (DOE) to request a reporting package for early submittal.
 - d. Contractor shall furnish to Owner's EH&S Department, Pullman, WA, within 3 Days from submittal or receipt, copies of the following documents:
 - 1) Form 2 Notification of Dangerous Waste Activities;
 - 2) All signed Uniform Hazardous Waste Manifests (original copy when shipping wastes and copy returned from the treatment, storage, disposal, or recycling facility), Land Disposal Restriction Notification forms, Certificates of Recycling/Disposal/Destruction, and Exception Reports;
 - 3) All Annual Reports; and
 - 4) All correspondence from the DOE.
 - 3. Owner remains responsible for Washington State dangerous waste and site contamination: (1) pre-existing Contractor's activities at the site, (2) not listed in the Contract Documents, and (3) not disturbed by Contractor through improper construction activities.
 - 4. For waste identified in contract document and for unanticipated Washington State dangerous waste or site contamination discovered during the course of the Work on the site, Contractor shall:
 - a. Collect, containerize, and accumulate all Washington State dangerous waste or site contamination in accordance with applicable Federal, State, and local regulations.
 - b. Coordinate all transportation and disposal activities through Owner's EH&S department, who will utilize the Washington State Hazardous Waste Disposal Services contract or equivalent pre-approved contractor. Owner's disposal contractor shall complete all applicable dangerous waste shipping papers including all Uniform Hazardous Waste Manifests, Land Disposal Restriction Notification forms, profiles and barrel packing lists.
- B. Hazardous Materials Spills and Releases:
- 1. Contractor and Subcontractor(s) shall immediately report all hazardous materials spills at the Project site to Owner. If a hazardous material spill occurs at a Project site in Whitman County, and if any individual may be affected by the spill, Contractor and/or Subcontractor(s) must immediately report the spill to Whitcom (emergency dispatch). In other counties,

Contractor and Subcontractor(s) must report spills to the appropriate emergency response agency in that area.

2. Contractor shall be responsible for spill containment, cleanup, decontamination, post-cleanup monitoring, disposal of any wastes generated from cleanup activities, and generation of any reports required by regulatory agencies and/or regulations including, but not limited to, WAC 173-303 and WAC 173-340.

C. Spill Prevention Control and Countermeasures:

1. Owner's EH&S department is responsible for Owner's SPCC Plan. Any of Contractor's on-site activities involving the handling and/or storage of materials meeting the definition of oil per 40 CFR 112 in containers and/or equipment with a capacity greater than 42 gallons must be included in the Owner's SPCC Plan. Contractor shall provide Owner's EH&S department with an inventory of this equipment or containers at least 14 Days prior to the equipment or containers being brought to the Project site.
2. Contractor shall provide and utilize secondary containment for containers and tanks of oil with a capacity greater than 42 gallons. Owner may waive this requirement in its sole discretion upon Contractor's request after Owner reviews Contractor's written explanation as to why secondary containment is unnecessary for a particular container or tank.

D. Asbestos:

1. All Contractor employees involved in excavation or demolition shall be asbestos awareness trained. Contractor shall submit to Owner the name of Contractor's competent trainer, the names of each of Contractor's trained personnel, and the date of each training. Contractor's submittal must also state that the training was conducted for asbestos awareness for the Work.
2. All asbestos abatement Work shall be performed by persons trained in Washington State-approved courses and certified by the State of Washington.
3. All asbestos abatement Work performed shall be overseen by a consultant hired by the Owner to ensure the Work meets regulatory standards and Owner requirements.
4. All asbestos cement pipe Work shall be performed by persons trained in an asbestos cement pipe procedures course whose content is reviewed and approved by the Washington State Department of Labor and Industries, per WAC 296-62-07722(3)(ii)(C).
5. If suspected asbestos-containing material is discovered during Contractor's execution of the Work, and abatement of the material is not a requirement of the Contract, Contractor shall suspend any Work that affects the material and immediately notify Owner. Contractor shall safeguard the area to prevent entry until certified personnel determine whether the material is non-asbestos containing or the material is abated, at which time the Work in that area may resume.

E. Lead:

1. Owner shall inform Contractor of lead-containing coatings and materials that the Contractor may encounter while performing the Work. These materials or coatings may release lead into the air, soil, or water, or may be a source of contamination due to skin contact. Owner shall provide general data about the percentage of lead content of each suspected lead-containing material or coating and/or provide Contractor with data showing the amount of lead per surface area.
2. Contractor is responsible for protecting its employees from lead exposure, as required by Washington law.
3. Contractor shall manage all paint chips, building components, soil, and/or other material considered by Owner to be dangerous waste according to the Dangerous Waste Management paragraph.

F. Polychlorinated Biphenyls:

1. Owner may survey oil-filled equipment prior to commencement of construction. This equipment includes, but is not limited to, transformers, electrical switches, hydraulic elevators, emergency generators, capacitors and light ballasts. Owner's survey shall usually determine if the equipment is filled with oil containing polychlorinated biphenyl (PCB). Owner shall remove, or arrange for the removal of, any equipment that contains oil in concentrations qualifying the equipment as dangerous waste per WAC 173-303.
2. If oil-filled equipment is discovered during Contractor's execution of the Work, Contractor shall suspend any Work that may affect the equipment and immediately notify Owner. Owner shall test the equipment and determine the appropriate management method for the equipment and the oil it contains.

G. Mercury:

1. Owner may survey all equipment suspected of containing mercury prior to commencement of construction. This equipment includes, but is not limited to, switches and thermostats. Owner's survey shall determine if the equipment contains mercury. Owner shall remove, or arrange for the removal of, any such equipment.
2. If mercury-containing equipment is discovered during Contractor's execution of the Work, Contractor shall suspend any Work that may affect the equipment and immediately notify Owner. Owner shall test the equipment and determine the appropriate management method for the equipment and the mercury it contains.

H. Hazardous Materials or Equipment:

1. Fixed equipment such as fume hoods, safety cabinets, and vacuum systems, and related ductwork, fans, and appurtenances, may contain or

be contaminated with hazardous materials. Owner may test this equipment to determine what, if any, hazards are present. If equipment contains a hazard, or if the equipment itself is a dangerous waste, Owner shall inform Contractor of the nature of the hazard including any information necessary for Contractor to protect its workers. If the equipment is a dangerous waste, Contractor shall dispose of, or make arrangements for the disposal of, the equipment per the above Dangerous Waste Management paragraph.

I. Underground Storage Tanks (USTs):

1. Removal of USTs shall be performed in accordance with DOE regulations. Removal of existing USTs shall be performed by a DOE-certified UST removal company following the submittal of required forms. Copies of forms must be provided to Owner's EH&S department at the same time they are submitted to DOE.
2. Installation of any UST must be done by DOE-certified UST installers. The installation shall be permitted by DOE following the submittal of completed UST installation forms. Copies of forms must be provided to Owner at the same time they are submitted to DOE.
3. Retrofits and upgrades of existing USTs must be completed by DOE certified companies. Records of the retrofit or upgrade must be submitted to DOE following the retrofit or upgrade. Copies of such records must be provided to Owner at the same time they are submitted to DOE.
4. If a UST is discovered during Contractor's execution of the Work, Contractor shall suspend any Work that may affect the UST and immediately notify Owner. Owner will determine if UST must be sampled and/or removed. If necessary, Owner shall engage a certified company to remove UST.

J. Department of Homeland Security (DHS) Chemicals of Interest (COI)

1. Contractor and Subcontractors shall report any COI to Owner as required by the DHS. Contractor may contact Owner's Representative in conjunction with the University's EH&S Department for the specific means of reporting.

1.05 WATER AND STORMWATER POLLUTION PREVENTION:

A. Water Pollution:

1. Discharge of any pollutants (including sewage and chlorinated water from water line disinfection) into surface or ground waters of the State (including storm drains, ditches and any other water conveyances) is prohibited.
2. Contractor removal of snow, ice, soil, and mud from roadways and sidewalks shall be accomplished without polluting storm drains or surface waters. Mud and soil removal shall be undertaken on a full-time basis, not just once or twice a day. Soil or mud that is dropped onto streets and

sidewalks by vehicles at the Project site shall immediately be cleaned by Contractor. Contractor may not use water to clean streets and sidewalks. Under no circumstances may dust mitigation cause soil erosion or pollution of surface waters.

3. If a discharge to surface or ground waters does occur, Contractor shall immediately notify Owner.

B. Stormwater Pollution Prevention Plan (SWPPP):

1. For projects that disturb a soil surface area of one acre or greater:
 - a. Contractor shall prepare a written SWPPP that meets DOE regulations and the requirements of Owner's Municipal Stormwater Permit.
 - b. Owner shall apply for a DOE NPDES Construction Stormwater General Permit for stormwater discharge, and then transfer the permit to Contractor. Contractor shall comply with all provisions of the permit.
 - c. Contractor shall maintain a copy of the NPDES permit and the SWPPP on-site at all times.
 - d. Contractor shall maintain on-site or on call, at all times, a Certified Erosion and Sediment Control Lead (CESCL).
 - e. Contractor's SWPPP shall identify all management practices used to prevent stormwater pollution and the location(s) at which each practice will be utilized on the Project site.
 - f. Contractor shall obtain approval from Owner of the SWPPP prior to groundbreaking. Contractor shall construct approved BMP's and the site inspected and approved, per permit requirements, prior to groundbreaking.
 - g. Contractor shall use best management practices (BMPs) and shall inspect BMPs at least once a week. In addition, Contractor shall inspect BMPs immediately following each rainfall event of 0.1 inches or greater.
 - h. Contractor shall maintain a written log detailing the results of inspections beginning with the first day of construction. Contractor's written log shall describe all erosion control activities resulting from inspections. In addition, the following dates and events shall be included in the written log:
 - 1) The beginning and completion of major grading activities.
 - 2) Rainfall events of 0.1 inches or greater.
 - 3) When construction activities temporarily or permanently cease on-site, or on a portion of the site.
 - 4) When stabilization measures are initiated for portions of the site.
 - 5) Stormwater sampling results.

- i. Contractor shall maintain and/or repair all BMPs as necessary to ensure continued performance of their intended function. Contractor's maintenance and repair activities shall include, but are not limited to:
 - 1) Removal of sediment from silt fences before it reaches approximately one third the height of the fence, especially if heavy rains are expected; and
 - 2) Cleaning or removal and replacement of drain inlet protection devices at least once every 7 Days, and once daily during storm events or before 6 inches of sediment can accumulate.
- j. Contractor shall remove all temporary erosion and sedimentation control measure from the Project site within 30 Days after final site stabilization is achieved, or after the temporary BMPs are no longer necessary. Contractor shall remove any trapped sediment from the Project site. Contractor shall permanently stabilize any areas of soil disturbed by sediment removal.
- k. In addition to sediment control, Contractor shall prevent other pollutant discharges from contaminating stormwater, groundwater, or soils.
 - 1) Any maintenance or repair of heavy equipment and vehicles involving oil changes, hydraulic system draining and removal, solvent and degreasing cleaning operations, fuel tank draining and removal, and other activities that may result in discharge or spillage of pollutants to the ground or into stormwater runoff must be conducted using spill prevention measures, such as drip pans. Contractor shall immediately clean any contaminated surfaces following any discharge or spill incident. Emergency repairs may be performed on-site using temporary plastic placed beneath and, if raining, over the vehicle.
 - 2) Wheel wash or tire bath wastewater shall be discharged to a separate on-site treatment system.
 - 3) Application of agricultural chemicals including fertilizers and pesticides shall be conducted in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Manufacturers' recommendations for application rates and procedures shall be followed.
 - 4) Use of lime, flyash, or other soil amendments that could alter the pH of discharge waters is prohibited.
 - 5) Highly turbid or contaminated dewatering water from construction equipment operation shall be handled separately from stormwater. Management options include infiltration, transportation off-site for legal disposal, or use of a sedimentation bag with outfall to a ditch or swale for small volumes of localized dewatering.

- I. Contractor shall provide to Owner all notifications/reports required by permit to DOE.
 - 1) If stormwater sampling results show turbidity greater than or equal to 250 NTU, Contractor shall immediately report to DOE and shall notify Owner of the report.
 - 2) Contractor shall file monthly Discharge Monitoring Reports (DMR's) with DOE as required. Contractor shall provide copies of all DMR's to Owner.
 2. For projects that disturb a soil surface area of 5,000 square feet or greater, but less than one acre, provisions shall be made to meet applicable local regulations, as necessary.
 - a. Contractor shall make provisions for inspection and approval by the local authority prior to groundbreaking.
 3. For projects that create additional impervious surfaces, provisions shall be made to meet stormwater flow control and treatment requirements, as applicable.
- C. Wetlands:
1. Contractor must follow all Federal, State and local regulations including but not limited to WAC 173-201 regarding protection of wetlands.

1.06 AIR POLLUTION

- A. Contractor shall comply with all provisions of the Owner's Air Operating Permit, WAC 173-400 and WAC 173-401 requirements as applicable.
- B. Contractor shall control pollutants, such as diesel emissions, chemical emissions, and dust generated by the Project, so that pollutants do not adversely impact the Project site or the surrounding-area air quality.
- C. Contractor shall submit to Owner within 30 Days of the Notice to Proceed a list of any stationary air emission-generating equipment included in the Work, such as: fuel-powered electrical generators, internal combustion engines, boilers, paint booths, CFC-containing equipment, or other regulated emission sources. Contractor shall assist Owner in the preparation of necessary permit applications, and Owner shall obtain necessary permits. Contractor shall abide by any conditions or requirements of permits.
- D. Per WAC 173-400, Contractor shall mitigate all fugitive emissions (such as dust, vehicle exhausts, and other emissions that do not pass through a stack, chimney, or vent) generated by the Work. Contractor shall mitigate dust at the Project site throughout the entire duration of the Work. Dust mitigation may include application of specific chemical compounds approved by Owner, or may be accomplished with intermittent watering and sprinkling at such a frequency as will satisfactorily settle dust (excluding paved surfaces). Paved surfaces shall be cleaned mechanically without the discharge of water or chemicals to storm drains

and/or surface waters. Under no circumstances shall Contractor permit dust mitigation cause soil erosion or pollution of surface waters.

- E. No materials shall be burned without required permits. If permitted burning is done, odors shall be minimized in accordance with the Owner's Air Operating Permit.
- F. CFCs (chlorofluorocarbons) or HCFCs (hydrochlorofluorocarbons) are not permitted as refrigerants in new or renovation projects. New permanently installed refrigeration equipment, such as chillers, temperature controlled chambers, air conditioning equipment, compressors, etc., must contain HFC (hydrofluorocarbon) refrigerants only (i.e., R-134A, R-404A, or R-507). At the completion of the Project, Contractor must provide detailed documentation to Owner about the refrigeration equipment installed, including identifying markings, capacity, and type of refrigerant. Refrigerant must be installed only by persons certified to do so.
- G. Indoor Air Quality:
 - 1. Owner shall notify Contractor of the location of fresh air supply intakes for buildings in the immediate area of the Work, and of fresh air supply intakes for buildings that may be affected by emissions from Contractor operations.
 - 2. Contractor shall notify Owner 3 Days prior to commencing Work in which Contractor must operate vehicles or equipment in areas where fresh air supply intakes are located.
 - 3. Contractor shall notify Owner 3 Days prior to commencing Work in which Contractor will be using solvents or other volatile chemicals, or processes which emit fumes, smoke, or strong odors that may affect fresh air supply intakes, or may enter Owner's buildings through doorways or windows.
 - 4. Contractor shall not allow its activities that emit vapors, fumes, smoke or strong odors to negatively affect fresh air supply intakes.
 - 5. If air releases of hazardous chemicals must occur, Contractor shall submit no later than 30 Days after the Notice to Proceed a chemical release plan detailing how such incidents may adversely affect Owner. Such a plan shall also specify protection to be provided to the employees of Owner and Contractor actions required to minimize chemical overexposure.
 - 6. During welding activity, Contractor shall confine fumes to the Project site, and the fumes must not adversely affect Owner's employees or students.

1.07 PUBLIC HEALTH

- A. Solid Waste Disposal:
 - 1. Contractor shall legally dispose of or recycle all solid waste at an off-site location. Contractor shall not burn, dump, or bury waste materials, debris, or rubbish on Owner property. Contractor shall clean the Project

site at the end of each work shift. Contractor is liable for any and all damage resulting from improper waste handling and disposal (see Section 07 74 19 - Construction Waste Management).

B. Environmental Noise:

1. Per WAC 173-60, and applicable local requirements, Contractor shall not exceed maximum permissible environmental noise levels for the duration of the Work.

C. General Sanitation:

1. Per WAC 246-203, Contractor shall supply adequate water for drinking and hand washing purposes. The use of common drinking cups or towels is prohibited. For hand washing purposes, Contractor shall supply hot running water, soap, disposable towels, and a waste receptacle.

D. Drinking Water Protection:

1. Per WAC 246-290 and 246-291, Contractor shall protect all public water supplies. No portion of a public water system containing potable water shall be put into service nor shall service be resumed until the facility has been effectively disinfected and a satisfactory bacteriological sample has been obtained from a DOE-certified laboratory. Results of sampling shall be sent to Owner. The procedure used for disinfection shall conform to current standards of the American Water Works Association.
2. A minimum sanitary control area around all wells shall be maintained at all times. The sanitary control area shall extend at least 100 feet from any well. No source of contamination may be constructed, stored, disposed or applied within the sanitary control area.
3. If wells are being constructed or abandoned, Owner shall procure the appropriate water rights and construction permits per WAC 173-160. Owner shall provide copies of these documents to Contractor. Wells shall be constructed/abandoned properly by a licensed well driller. Contractor shall submit a plan to Owner detailing how all disinfection shall be accomplished.
4. Backflow Prevention:
 - a. Any connection made by Contractor to Owner's drinking water system, including connection to a fire hydrant, must be made through a backflow prevention assembly approved by a Washington State certified cross connection control specialist (CCS) engaged by Owner and inspected and tested by a Washington State certified backflow assembly tester (BAT).
 - b. Contractor shall label all non-potable water outlets, in a manner acceptable to the Owner, "Non-potable Water / Do Not Drink".

E. Vector Control:

1. Buildings shall be constructed so as to minimize the attraction and/or harborage of pests and vectors such as birds and rodents. Minimize bird roosting areas by not constructing exposed pipes, beams, or flat ledges on openings, especially underneath covered areas directly accessible to the outside. Openings 1/4-inch or larger shall be sealed. Leave a minimum of a 3-foot swath around the building that is bare. Do not plant trees, shrubs and grass immediately adjacent to building.
2. The presence of standing water shall be minimized or eliminated to prevent mosquito breeding.

F. On-Site Sewage Disposal:

1. Contractor is responsible for fully complying with WAC 246-272. A construction permit application shall be submitted to the appropriate jurisdictional authority for approval. The jurisdictional authority shall issue a construction permit prior to the commencement of construction and shall perform pre-opening inspections. Contractor shall ensure that the appropriate authority inspects and approves the site prior to construction and when the project is substantially complete.

G. Water Recreation Facilities:

1. Contractor is responsible for fully complying with WAC 246-260. A construction permit application shall be submitted to the appropriate jurisdictional authority for approval prior to the commencement of construction. WSU EH&S shall be consulted prior to the development of a construction permit application. Contractor shall ensure that the appropriate regulatory authority inspects and approves the site prior to operation.

H. Food Service Facilities:

1. Contractor is responsible for fully complying with WAC 246-215. A construction permit application shall be submitted to the appropriate jurisdictional authority for approval prior to the commencement of construction. WSU EH&S shall be consulted prior to the development of a construction permit application. Contractor shall ensure that the appropriate regulatory authority inspects and approves the food service prior to operation.

1.08 OCCUPATIONAL HAZARD MANAGEMENT

A. Chemical Hazard Communication:

1. If any hazardous chemicals will be used in the Work or present at the Project site, copies of applicable Material Safety Data Sheets (MSDS) shall be made immediately available to Owner prior to use by Contractor and during any use of the hazardous chemicals in the Work.

2. If the use or presence of hazardous chemicals at the Project site may affect the health of individuals outside the Project site, Contractor shall submit a written plan to Owner at least 30 Days prior to such use or presence detailing how Owner can avoid exposure to the products. Contractor shall submit MSDS / SDS to Owner for any hazardous chemical to which persons outside the project site may be exposed. The exposure avoidance plan shall also specify actions that should be taken if inadvertent exposure occurs. Owner shall provide Contractor with a written plan detailing how Contractor employees can avoid exposure to hazardous chemicals used by Owner that may impact the Project site, and shall specify actions which should be taken if inadvertent exposure occurs. Owner shall submit MSDS / SDS to Contractor for any hazardous chemical to which persons inside the project site may be exposed.
- B. Lock-Out/Tag-Out:
1. When Owner and Contractor are to be engaged in coordinated activities requiring the control of hazardous energy, Owner and Contractor shall inform each other of their respective lock-out or tag-out procedures.
- C. Confined Space:
1. When Contractor employees are to enter permit-required confined spaces, Owner shall:
 - a. Inform Contractor that the Project site contains permit required spaces and that permit-space entry is allowed only through compliance with a confined-space program meeting WAC 296-809.
 - b. Inform Contractor of hazards that have been identified.
 - c. Coordinate entry operations with Contractor when both Owner and Contractor personnel will be working in or near permit spaces.
 - d. Debrief Contractor at the conclusion of the entry operations regarding any hazards confronted or created in permit spaces during entry operations.

END OF SECTION 01 41 19

PART 1 GENERAL

1.01 SUMMARY

- A. Contractor shall perform all Work in a skillful and workmanlike manner. Materials and equipment furnished by Contract and any Subcontractor(s) must be of good quality and new unless the Contract Documents require or permit otherwise. Materials shall conform to the manufacturer's standards in effect at the date of execution of the Contractor and shall be installed in accordance with the manufacturer's instructions, specifications, and directions. Contractor shall, if requested by Owner, furnish satisfactory evidence regarding the kind and quality of any materials identifying thereon the source, and warranting their quality and compliance with the Contract Documents.
- B. Section includes:
 - 1. Contractor's Quality Control Program;
 - 2. Field samples;
 - 3. Mock-ups;
 - 4. Manufacturer's instructions;
 - 5. Manufacturer's field services;
 - 6. Testing laboratory services; and
 - 7. Contractor tests and inspections.

1.02 QUALITY CONTROL PROGRAM SUBMITTALS

- A. Contractor shall submit a written Quality Control Program for the Project per the Pre-Construction Submittal Requirements of Section 01 33 00. This submittal shall include but not be limited to the following:
 - 1. An overview of Contractor's Quality Control Program.
 - 2. Identification and resume of Contractor's on-site Quality Control Manager (QCM).
 - 3. A description of the activities, record keeping, and correspondence that the QCM will perform and be accountable for throughout the duration of the Project.
 - 4. A description of the quality control meetings to be conducted, sample inspection check lists (i.e., samples of actual inspection check list forms that will be submitted to Owner when scheduling inspections), and Subcontractors' quality control representatives. All forms that Contractor intends to use in its Quality Control Program shall be part of the submittal.
 - 5. A description of the QCM activities when inspections fail to verify compliance with the Contract Documents.
 - a. These activities are to include, as a minimum, follow-up with

- applicable Subcontractors, correction and/or completion of Work required for re-inspection, and the re-inspection.
- b. Contractor shall submit its weekly Non-Compliance Logs at least 2 Days prior to each Progress Meeting.
- 6. A description of the QCM activities to provide the required notifications for inspections.
 - 7. A description of record keeping and information turn-over to Owner as a component of the Operating and Maintenance data (i.e. factory representative's start-up reports and permission to energize, verification of correct voltage and phasing to motors, etc.).
 - 8. Contractor will submit a daily report within 3-business days for any day work is performed. The daily report should include the following information; the list may be adjusted or relaxed with Owners Representative approval depending on size and scope of the project requirements:
 - a. progress photo's,
 - b. list of contractor's and work-force #'s for each contractor,
 - c. RFI's or questions,
 - d. equipment quantities in use or idle,
 - e. weather (if work is being performed outside),
 - f. construction delays or likely delays,
 - g. 3rd part inspections or city visits,
 - h. safety issues,
 - i. meetings conducted,
 - j. substantive material deliveries, and
 - k. any other relevant facts occurring on the site.

1.03 CONTRACTOR'S QUALITY CONTROL PROGRAM

- A. Contractor shall establish and maintain a written Quality Control Program which shall be issued by Contractor to Subcontractors performing Work on the Project and utilized to verify that the execution of the Work is consistent with the requirements of the Contract Documents.
- B. The Quality Control Program shall include, but not be limited to the following:
 - 1. Preparatory Phase:
 - a. Prior to beginning Work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. Contractor shall:
 - b. Review of each paragraph of applicable specifications, reference codes, and standards. Make a copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field at the preparatory inspection. Maintain these copies in the field, available for use by Owner's Designated Representative until final acceptance of the work.

- c. Review the Drawings.
 - d. Check to assure that all materials and/or equipment have been tested, submitted, and approved.
 - e. Review provisions that have been made to provide required control inspection and testing.
 - f. Examine the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
 - g. Perform a physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
 - h. Review appropriate accident safety procedures.
 - i. Discuss procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
 - j. Check to ensure that the portion of the plan for the work to be performed has been accepted by the Owner's Designated Representative.
 - k. Schedule, manage and record the minutes of each preparatory meeting.
 - l. Review all RFIs associated with the Work.
2. Initial Phase:
- a. At the beginning of the Work, Contractor shall:
 - b. Check work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
 - c. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing. Resolve all differences and deficiencies.
 - d. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
 - e. Check safety to include compliance with and upgrading of the Safety Plan. Review with each worker. Particular attention should be given to high hazard work.
 - f. Prepare and attach to the daily CQC report separate minutes of this phase.
 - g. Repeat the initial phase any time acceptable specified quality standards are not being met.
3. Follow Up Phase:
- a. Perform daily checks to assure control activities, including control testing, are providing continued compliance with contract

requirements, until completion of the Work. The checks shall be made a matter of record in the QC documentation. Conduct final follow-up checks and correct deficiencies prior to the start of additional features of work which may be affected by the deficient work. Do not build upon nor conceal non-conforming work.

- C. Contractor's Quality Control Program shall be independent of any inspections and testing performed by Owner or by any independent testing and inspection agencies hired by Owner.
- D. Within the Quality Control Program, Contractor shall have available on the jobsite at all times a written report of quality control activities. At a minimum, the report shall note Project site quality control inspections, performance of scheduled tests and follow-up testing, other required inspections, deficiency log, and examinations of workmanship and quality.
- E. Test results shall identify applicable Contract (including Specification) requirements, the test or analysis procedures used, and the actual test results. A statement shall be included that the item tested or analyzed conforms or fails to conform to the Contract Documents. Each report shall be conspicuously stamped on the cover sheet "CONFORMS" or "DOES NOT CONFORM" as the case may be. All test reports shall be signed by a testing laboratory representative authorized to sign certified test reports. Copies of all test reports shall be available on the jobsite at all times.
- F. If the Quality Control Program is found to be defective and Contractor does not promptly correct the deficiency, Owner may:
 - 1. Withhold payment until satisfactory corrective action has been taken, or
 - 2. Issue a stop work order until satisfactory corrective action has been taken.
- G. Pre-Inspections: Contractor shall pre-inspect Work that requires normal, special, and additional inspections as indicated in the Contract Documents.

1.04 FIELD SAMPLES

- A. Field samples are defined as the partial installation of selected materials at the Project site for Owner's review and acceptance of visual features and workmanship. Generally, accepted field samples are incorporated into the Work.
- B. Contractor shall provide field samples as required by the Contract Documents at location acceptable to Owner.
- C. Perform Work in accordance with the Contract Documents.
- D. Approved samples will serve as an acceptable standard of quality and workmanship.
- E. Maintain samples until completion of relevant Work.

- F. Upon completion of relevant Work or when directed by Owner, demolish and remove samples from Project site unless sample is accepted as part of completed Work.

1.05 MOCK-UPS

- A. Contractor shall provide mock-ups as required by the Contract Documents. Provide additional mock-ups, as required by Owner, until approval is obtained.
- B. Do not proceed with subsequent Work until approval of the mock-up is obtained.
- C. The approved mock-up shall be the standard of workmanship and materials for the Work that is represented by the mock-up.
- D. Maintain mock-up in approved condition, until directed otherwise by Owner.
- E. Unless specified otherwise, remove mock-up at completion of the Work or when directed by Owner.
- F. Unless specified or approved otherwise, mock-ups shall be completed and approved prior to the pre-installation meeting at which the Work represented by the mock-up will be discussed.
- G. Notify Owner a minimum of 7 Days prior to requesting mock-up approval.

1.06 MANUFACTURERS' INSTRUCTIONS

- A. Contractor shall comply with manufacturers' instructions in full detail, including each step in sequence. Do not omit preparatory steps or installation procedures unless specifically modified or exempted by Contract Documents.
- B. Should instructions conflict with Contract Documents, Contractor shall request clarification before proceeding.

1.07 MANUFACTURERS' FIELD SERVICES

- A. When specified, Contractor must require product manufacturer to furnish a qualified representative to observe field conditions and quality of workmanship, and to provide recommendations, certifications, and other specified services.
- B. Representative shall submit written report to Owner listing observations and recommendations.

1.08 TESTING LABORATORY SERVICES

- A. Owner will arrange for services of an independent Testing Laboratory to inspect and test the Work to verify compliance with Contract Documents.
- B. Contractor's Responsibilities:

1. Cooperate with Testing Laboratory personnel, and furnish access, tools, samples, certifications, test reports, design mixes, equipment, storage, and assistance as requested by the Testing Laboratory.
2. Notify Owner and Testing Laboratory a minimum of 7 Days in advance of all required tests and 48 hours in advance of all required inspections. When tests or inspections cannot be performed, through fault of Contractor, Contractor shall reimburse Owner for costs incurred by Owner.
3. Contractor shall remove and replace Work found to not comply with Contract Documents.
4. If initial tests and inspections indicate deficient work, Contractor shall reimburse Owner for costs of all subsequent tests and inspections related to such deficiency.
5. All damage to Work as a result of normal testing operations shall be repaired by Contractor to match surrounding surfaces.
6. Schedule testing and inspection so that work of testing and inspection personnel will be as continuous and brief as possible.
7. Contractor shall reimburse Owner for travel and lodging expenses incurred for testing and inspection services performed outside a radius of 100 miles of the Project site.

1.09 CONTRACTOR TESTS AND INSPECTIONS

- A. Inspection and testing performed exclusively for Contractor's convenience shall be the Contractor's sole responsibility.
- B. Earthwork Compaction Testing Requirements:
 1. Owner will engage the services of a Testing Laboratory to perform all soil and structural fill compaction testing. Compactions of any fill material shall be equal to or exceed the specified percentage of maximum dry density as defined by ASTM test procedure D1557 (modified proctor). Obtaining such specified compaction performance is the sole responsibility of Contractor.
 2. During any of Contractor's operations, Owner reserves the right to perform compaction tests for its own information only. At Owner's discretion, copies of such tests may be made available to Contractor. The taking of any such tests by Owner in no way relieves Contractor from testing to assure itself of compliance with the Contract Documents.
- C. Approved Structural Steel Fabricators:
 1. Contractor shall pay for any required structural steel fabrication special inspections.
- D. Cast-in-Place Concrete Strength Testing Requirements:

1. Concrete test cylinders will be made by Owner or Owner's Testing Laboratory. Contractor shall be responsible for proper care of cast cylinders while on the Project site (with respect to temperature, humidity and protection).
2. Contractor is also responsible for timely transportation to the laboratory in Spokane (or closer) on a schedule that will permit adequate laboratory curing before testing.
3. Contractor shall notify the Owner at least 48 hours before any concrete pour to allow time for observation.
4. Frequency and location of tests are to be determined. As a minimum, four test cylinders will be made for each day's pour or for every hundred cubic yards, whichever is greater.
5. The results of Owner's tests will be made available to Contractor.
6. The quality of all concrete is to be the sole responsibility of Contractor. If Contractor feels that additional testing is required to assure continued quality control, the frequency, testing, and payment therefore is Contractor's responsibility.

E. All Other Work Inspection and Testing Requirements:

1. Contractor shall, at no additional cost to Owner, provide all inspections and tests required to assure full compliance with the Contract Documents. Unless specifically required, Contractor is not required to submit copies of such test results to Owner. Contractor, however, shall maintain copies of all testing and inspection reports at the Project site for inspection and copying by Owner.
2. The performance of testing or inspection by Owner or Owner's Testing Laboratory does not relieve Contractor from responsibility for meeting all requirements of the Contract Documents.

END OF SECTION 01 45 00

PART 1 GENERAL

1.01 SUMMARY

- A. General: Owner will select and employ an independent testing agency, engineering service, or a special inspector to conduct the tests and inspections to be provided by Owner. Inspections that are normally associated with obtaining State approval (e.g., electrical work as specified in Division 26, etc.) shall be provided and paid for by Contractor. Contractor shall comply with all applicable building codes and provide all testing services required by the Contract Documents unless specifically identified as Owner's responsibility.
- B. Owner's testing agency shall prepare test reports, logs and certificates applicable to the Work for which Owner will provide testing and shall deliver the specified number of copies to the designated parties. If any inspection or testing 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 Owner's services and expenses, shall be at Contractor's expense.

1.02 DESCRIPTION

- A. Definition: For the purpose of this Section, all references made herein to testing laboratory, testing agency, or special inspector shall refer to as the tests or inspections conducted by a special inspector provided by Owner.

1.03 QUALITY ASSURANCE

- A. Qualifications: Contractor's inspection personnel must be approved by Owner and possess certain qualifications as stated in this Section. The testing agency shall comply with all requirements of ASTM E329.
 - 1. The inspector for waterproofing and roofing shall have specialized technical knowledge and experience specific to waterproofing and roofing.
 - 2. The testing agency for concrete testing and inspection services should be an agency other than the agency employed by Contractor for the purpose of establishing concrete mix designs, etc.
 - 3. Geotechnical inspection will be performed by a licensed geotechnical consulting firm.

1.04 DUTIES OF OWNER'S TESTING AGENCY

- A. General: Testing agencies shall conduct testing and inspection services, interpret them, evaluate the results for compliance with the Contract Documents, and report the findings to the Owner, Contractor, and local building authority, as applicable. Testing and inspection services shall be performed in accordance with applicable ASTM standard methods or other specified procedures.

- B. Testing: Materials to be tested are those so specified and others as Owner or authorities having jurisdiction over the Project may direct.
- C. Inspection: Inspections, continuous and special, shall be performed by the inspectors as required by the Contract Documents and authorities having jurisdiction.
- D. Rejected Work: Inspectors shall have the right to recommend rejection of materials and workmanship that is defective. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the Project site without charge to Owner. If Contractor does not correct rejected work within a reasonable time, Owner may elect to correct the work and charge the expense to Contractor.
- E. Inspectors are not authorized to do the following:
 - 1. Release, revoke, waive, alter, or enlarge on requirements of the Contract Documents;
 - 2. Approve or accept any portion of the Work, except as specified for soil conditions (i.e. bearing capacities, etc.);
 - 3. Perform any duties of Contractor; or
 - 4. Stop Work.
- F. Should the Owner elect at any time before Final Acceptance to make an examination of Work already completed by removing or tearing out the same, Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such Work is found to be defective in any respect, Contractor shall be responsible for the cost of such examinations and of satisfactory reconstruction. If such Work is found to meet the requirements of the Contract, however, Owner shall be responsible for the cost of such examinations and of satisfactory reconstruction.

1.05 PAYMENTS

- A. Owner shall pay for the cost of initial testing and inspection, except as otherwise specified in the Contract Documents. Initial tests and inspections are defined as the first tests and inspections as hereinafter specified.
- B. In the event any test or inspection reveals Work not in compliance with the Contract Documents, Contractor shall pay for or be backcharged for all costs of re-testing and/or re-inspection.
- C. Additional tests and inspections not herein specified but requested by Owner shall be paid for by Owner, unless the results of such tests or inspections reveal Work not in compliance with the Contract Documents, in which case Contractor shall pay for or be backcharged for all costs of testing, re-testing, re-inspection, and any related Owner costs.

- D. Costs for additional tests or inspections required because of any change in materials or change in the source of supply from that specified shall be paid by or backcharged to Contractor.
- E. Contractor is responsible for all work required to correct any deficiencies.
- F. Contractor is responsible for the cost of any testing required for the convenience of Contractor in the scheduling and performance of the Work.
- G. Contractor is responsible for the cost to verify testing done without prior notice, with improper supervision, or contrary to construction practice, and for testing of materials for which mill reports are required but not furnished.
- H. Contractor is responsible for the cost of any testing that is required to be performed by Contractor by the Contract Documents.

1.06 TESTS AND INSPECTION REPORTS

- A. Copies of Test and Inspection Reports: Copies of test and inspection reports will be distributed at weekly intervals. Such reports shall include all tests performed, regardless of whether such tests indicate that material is satisfactory or unsatisfactory. Samples taken but not tested shall also be reported. Records of special sampling operations shall also be reported. Test and inspection reports shall be distributed electronically as requested by Owner.
- B. Test and inspection reports shall be distributed as follows:
 - 1. Architect/Engineer;
 - 2. Geotechnical Engineer or Soil Consultant;
 - 3. Owner; and
 - 4. Contractor.

1.07 CONTRACTOR'S RESPONSIBILITIES

- A. Coordination: Contractor shall initiate and coordinate all required tests and inspections, including conforming with requirements of applicable public agencies and authorities. Inspection of the Work does not relieve Contractor of any obligation under the Contract. The Owner's Designated Representative shall have authority to reject Work that is not in compliance with the Contract Documents.
- B. Access: Inspectors shall at all times have free access to the Work, wherever the Work is in preparation. Contractor shall at all times provide and maintain proper facilities and safe access for such inspection. Contractor shall also cooperate with testing personnel and furnish access, tools, samples, certifications, test reports, design mixes, equipment, storage, and requested assistance.
- C. Storage Facilities: Contractor shall furnish adequate storage facilities for the sole

- use of the testing laboratory for safe storage of specimens that must remain on the site.
- D. Data: Furnish records, drawings, certificates and similar data, including Shop Drawings and Change Orders, as may be required by the testing and inspection personnel to confirm compliance with the Contract Documents.
 - E. Notice: Contractor shall furnish notice to Owner and inspector at least 48 hours in advance of all required tests and inspections, unless otherwise specified.
 - F. Defective Work: Contractor shall remove and replace any Work found defective by Owner or not complying with the Contract Documents at no additional cost or Contract Time. Where testing personnel take cores or cut-outs to verify compliance, repair prior to acceptance. Where defective Work requires redesign, any redesign costs shall be paid for by Contractor.
 - G. Cancellations: Contractor shall give sufficient advance notice to the inspector to allow in the event of any cancellation or rescheduling of a previously scheduled test or inspection. Any charges due to insufficient advance notice of cancellations or delay shall be paid by or backcharged to Contractor.

1.08 TEST FAILURES

- A. Where a sample fails to pass a required test, Owner may permit re-testing of the sampled material. In such cases, two samples shall be tested and the material shall be rejected if either of the two subsequent samples fail.

1.09 REPORTING TEST FAILURES

- A. Immediately upon inspector's determination of a test failure, inspector shall notify Owner. On the same day, inspector shall send written test results to those named on the distribution list above.

1.10 REMOVAL OF MATERIALS

- A. Unless otherwise directed, materials not conforming to the requirements of the Contract Documents shall be promptly removed from the Project site and properly disposed of without additional expense to Owner.

END OF SECTION 01 45 23

PART 1 GENERAL

1.01 SUMMARY

- A. Contractor shall be evaluated on performance throughout the course of the contract to provide past performance documentation for future projects.
- B. Section includes:
 - 1. Program Objectives;
 - 2. Performance Categories and Assessment;
 - 3. Evaluation Reports;
 - 4. Notice, Review and Appeal.

1.02 PROGRAM OBJECTIVES

- A. The Contract Performance Evaluation Program is intended to improve contractor selection given the following primary objectives:
 - 1. Assist the Owner in evaluating the contractor's qualifications and proven ability to successfully perform future contracts when past performance has been previously documented;
 - 2. Provide the University objective data relating to Contractor responsibility;
 - 3. Provide contractors with a means of enhancing their qualifications and reputation by receiving recognition for exceptional performance;
 - 4. Encourage better working relationships between the University and the Contractor and to provide feedback to the contractor during and after the contract period;

1.03 PERFORMANCE CATEGORIES AND ASSESSMENT

- A. Contractor shall be evaluated based upon the following categories:
 - 1. Schedule and Time Management;
 - 2. Quality Management;
 - 3. Communication Effectiveness;
 - 4. Management Approach;
 - 5. Code and Compliance; and
 - 6. Cost.
- B. Each of the above categories will be assessed by multiple key project stakeholders and provided one of the following performance levels based upon objective and cumulative data:
 - 1. Outstanding (5): Contractor has exceeded the majority of all of the

significant contract criteria and has met or exceeded the Schedule, Quality, Communications, Management, Code Compliance and Cost requirements of the contract. The contractor was extremely or completely knowledgeable of the contract requirements and applicable laws and regulations. A very consistent high level of cooperation, project management, and job site control appreciably contributed to an unusually good result.

2. Very Good (4): Contractor has exceeded many of the significant contract criteria and has met or exceeded some of the Schedule, Quality, Communications, Management, Code Compliance, and Cost requirements of the contract. The contractor was knowledgeable of the contract requirements and applicable laws and regulations. Was generally cooperative and performed their work with minimal prompting. Their performance results were very good.
3. Satisfactory (3): Contractor has satisfactorily met the overall contract criteria and has met the overall Schedule, Quality, Communications, Code Compliance and Cost requirement of the contract. The contractor occasionally had to be prompted or reminded of the contract requirements, but overall the project was acceptable, producing an acceptable result.
4. Marginal (2): Contractor may have met many, but not all, of the contract criteria and failed to meet one or more of the Schedule, Quality, Communications, Code Compliance or Cost performance requirements of the contract. Even though the project may have been accepted, the contractor's performance, as evaluated, was marginal overall. The contractor frequently had to be prompted or reminded of the contract requirements; overall the project was less than satisfactory.
5. Unsatisfactory (1): Contractor failed to meet many or most of the contract criteria and failed to meet the overall Schedule, Quality, Communications, Code Compliance and Cost performance requirements of the contract. While the project may have been accepted by the owner, the effort expended in prompting the contractor to perform was excessive. The contractor's poor or uncooperative performance created serious unnecessary and avoidable difficulties in achieving contract completion.

1.04 EVALUATION REPORTS

- A. At the midpoint of project completion, Owner shall provide contractor with a draft Contract Evaluation Report based upon the current performance during the contract. This shall provide the Contractor an opportunity improve performance levels during the contract, and provide an opportunity for Contractor-Owner communication and working relationship.
- B. A final Contract Performance Evaluation Report will be completed upon contract completion and shall become the official report of record.
 1. A Summary Contract Performance Evaluation will be provided to the Contractor within 30 calendar days after Final Completion.

2. Final Contract Performance Evaluation Reports will remain on record for a minimum of 5 years from date issued.
- C. Upon receipt of the Summary Contract Performance Evaluation, Contractor shall review the report and may request a debrief conference within 21 calendar days of receipt.
- D. If after the debrief, Contractor would like to dispute the evaluation findings the Contractor shall submit in writing, the specific reasons for disagreement and include the basis for their appeal within 14 calendar days following the debrief.
 1. Upon receipt of appeal, Owner shall convene a review with the Assistant Vice President, Facilities Services, Capital to consider the objectivity, accuracy, completeness and fairness of the Contract Performance Evaluation.
 2. The Contractor shall be notified and issued a final determination within 30 calendar days of receipt of the appeal.

END OF SECTION 01 45 34

PART 1 GENERAL

1.01 TEMPORARY UTILITIES

- A. Owner may furnish to Contractor temporary Owner-owned utilities when available and upon Owner written approval. Owner reserves the right to restrict the use of its utilities if, in its opinion, Contractor fails to adequately conserve utilities or to use utilities appropriately. When using Owner-owned utilities, Contractor is to make metered connections to the nearest available service and disconnect same when no longer needed.
- B. If Owner-owned utilities are not available at the Project site, or if Owner restricts use of Owner-owned utilities, Contractor shall obtain required services from commercial sources or public utilities, and Contractor is responsible to pay for all utility costs.
- C. Contractor shall field verify the availability of utility services provided by Owner and coordinate the Work accordingly.
- D. In remodeling projects where portions of the building are to remain in service, Contractor shall be responsible for coordinating the Work to maintain utility services to the occupied portions of the building.

1.02 TEMPORARY ELECTRICAL SERVICE

- A. Contractor shall provide all services required for construction operations and may connect to existing services when available upon Owner approval. .
- B. Contractor shall provide lighting for construction operations.
- C. Contractor may use existing lighting when available and adequate.
- D. Contractor shall maintain site lighting throughout the duration of the Work.

1.03 HEAT AND VENTILATION

- A. Contractor shall provide heat and ventilation as required to maintain specified conditions for construction operations and to protect materials and finishes from damage due to temperature or humidity.
- B. After a building is substantially enclosed, the permanent heating system or a temporary hook-up of equipment from the permanent system may be used for temporary heat provided that the equipment is properly installed by the responsible electrical and mechanical Subcontractors and available for supplying temporary heat. Owner shall be the sole judge of the adequacy of the building enclosure for temporary heating or cooling purposes.
- C. Contractor shall arrange with the electrical and mechanical Subcontractors installing said systems and equipment for the use, operation, and maintenance of

the systems. Contractor shall pay for all connections and attendants for temporary heating, including necessary accessories such as temporary (construction) air filters to protect the air distribution systems from contamination.

- D. Contractor shall provide a dust free air distribution system and correct all damage to this system caused by the Work.
- E. In existing facilities, Contractor shall coordinate use of the existing systems with Owner. Contractor shall extend and supplement with temporary units as required to maintain specified conditions for construction operations.
- F. Use of electric resistance type heating systems for temporary heat is prohibited.
- G. The warranty period for any permanent equipment used during construction will not commence until Contractor achieves Substantial Completion.

1.04 TEMPORARY WATER SERVICE

- A. Unless available from an Owner-owned utility, Contractor shall provide service required for construction operations. At all times, Contractor shall utilize backflow/cross-connection devices, certified by Owner, to safeguard water supply.
- B. For Work in existing facilities, Contractor shall connect to existing services when approved by Owner and extend branch piping with outlets so that water is available for use by all persons associated with the Work.
- C. Provide drinking water from a safe source for all those associated with the Work.

1.05 SANITARY FACILITIES

- A. Contractor shall provide temporary restroom facilities. Facilities shall not directly or indirectly drain or discharge onto Owner property or any waters of the State. Place where directed at the time Work begins; maintain in sanitary condition. Remove upon completion of the Work and disinfect the premises.
- B. Use of permanent and/or existing Owner's facilities is not allowed.

1.06 BARRIERS

- A. Contractor shall provide barriers as required to prevent public entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- B. When temporary fencing is indicated by the Drawings, or if fencing is provided at Contractor's option, enclosures shall be constructed of 6 feet high commercial grade chain link with vehicular and personnel gates, as required.

1.07 ENCLOSURES

- A. Contractor shall provide temporary weather-tight closures of openings to provide acceptable working conditions, protect materials, facilitate temporary heating, and prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.
- B. Contractor shall provide temporary roofing when so indicated by the Drawings or when made necessary by the Project requirements.
- C. Contractor shall provide temporary dust-proof partitions when required to confine dust and moisture to the immediate Work area.
- D. Contractor shall provide temporary noise-proof partitions when required to confine noise to the immediate Work area.

1.08 PROTECTION OF EXISTING FACILITIES

- A. Utility Tunnel Protection: Contractor shall provide adequate planking across any tunnels to distribute loads and prevent damage. If necessary, Contractor shall provide temporary shoring inside tunnel areas.
- B. Low Overhead Clearance: Contractor shall be fully responsible for addressing all vehicular limitations caused by low overhead restrictions throughout campus. Route all traffic to avoid damage to overhead structures. Review proposed routing with Owner prior to commencement of construction.
- C. Tree and Plant Protection: Contractor shall protect trees and other plants not scheduled for removal; maintain protection until Project completion.
 - 1. In the event that a tree or plant is damaged as a result of the Work that, in the opinion of Owner, requires replacement, Contractor shall be responsible for such replacement.
 - 2. If at any time Contractor judges that the protection of plant materials designated to be saved is incompatible with Work required, or if operations necessarily threaten the health of any plant material, Contractor shall immediately notify Owner and cease Work affecting the area until a written agreement is reached concerning acceptable procedure.

1.09 SECURITY

- A. Contractor shall provide security to protect the Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, and theft. Coordinate with Owner's security program.
- B. During construction, all openings to Owner's utility tunnel system must be protected against unauthorized entry. Contractor shall provide closures, approved by Owner, including locked doors or hatches at any openings created by the Work.

1.10 PROTECTION OF INSTALLED WORK

- A. Contractor shall provide temporary protection for installed products. Control traffic in immediate area to minimize damage.
- B. Contractor shall provide protective coverings for walls, projections elevator cabs, jambs, sills, and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects, and storage.
- C. Contractor shall prohibit traffic and storage on waterproofed and roofed surfaces and on lawns and landscaped areas.

1.11 CLEANING DURING CONSTRUCTION

- A. Contractor shall clean the site each day during construction and shall prevent the accumulation of waste materials and rubbish.
- B. Contractor shall clean interior areas prior to the start of finish Work and maintain areas free of dust and other contaminants during finishing operations.

1.12 OFF-SITE CLEAN UP

- A. Contractor shall continuously keep sidewalks, lawns, parking areas, and streets clear of construction materials, debris, gravel, rock, and dirt related to the Project.

1.13 LIFTING DEVICES AND HOISTING FACILITIES

- A. Contractor shall provide cranes, hoists, towers, and other lifting devices necessary for the proper and efficient movement of materials.

1.14 MECHANICAL AND ELECTRICAL SYSTEM SHUT-DOWNS

- A. Any shut-down of mechanical or electrical systems affecting Owner's operations shall be scheduled by Contractor during off-hours. Contractor shall submit a written shut-down request providing at least 14 Days advance notice. Any shut-down must be coordinated with and approved by Owner.

1.15 CONSTRUCTION PARKING

- A. Contractor's employees may park only in accordance with campus traffic and parking regulations and pay all required fees.
- B. When working in Pullman's central campus, Contractor's vehicular use will be limited to the following:
 - 1. Delivery of materials to and from Project site;
 - 2. Single vehicle for use by Project supervisor of each major Contractor (four total vehicles maximum); and

3. Workers' vehicles shall not be allowed to park in the central mall.

1.16 NOISE CONTROL

- A. Any construction related noise that interferes or is likely to interfere with normal use of adjacent space(s) shall be scheduled and approved by Owner.
- B. Contractor shall restrict any construction related noise to the hours approved by Owner and in accordance with the state and local noise ordinance.
- C. Owner may approve Contractor working extended hours. Request any extended hours of operation with Owner.

1.17 TRAFFIC OBSTRUCTIONS

- A. Contractor shall submit a written traffic control plan for all traffic obstructions, either pedestrian or vehicular, for approval by Owner, per the Pre-Construction Submittal Requirements of Section 01 33 00.
- B. In some cases, it may be necessary to develop special routes for large or unwieldy deliveries that could interfere with pedestrian movement, especially at peak times.
- C. Contractor shall avoid deliveries or equipment operations that block street traffic during peak times.
- D. Pedestrian Obstructions: Any equipment on sidewalks or other pedestrian ways shall be barricaded. Barricades shall include a horizontal member at a maximum of two feet above the walking surface.

1.18 REMOVAL OF TEMPORARY FACILITIES

- A. Contractor shall remove temporary materials, equipment, services, and construction facilities prior to Substantial Completion inspection.
- B. Contractor shall clean and repair damage caused by installation or use of temporary facilities.
- C. Contractor shall restore existing facilities used during construction to specified or original condition.

END OF SECTION 01 50 00

PART 1 GENERAL

1.01 PRODUCTS

- A. Products include material, equipment, and systems.
- B. Comply with Specifications and referenced standards as minimum requirements.
- C. Components required to be supplied in quantity within a specification section shall be the same, and shall be interchangeable.
- D. All materials shall be new unless specifically noted otherwise.

1.02 TRANSPORTATION AND HANDLING

- A. Transport products by methods to avoid product damage; deliver in undamaged condition in manufacturer's unopened containers or packaging, dry.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage.
- C. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

1.03 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.
- B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
- C. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.
- D. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged, and are maintained under required conditions.

1.04 VARIATION FROM SPECIFIED PRODUCTS

- A. Subsequent to Bid Opening/Proposal - Approved Equivalents:
 - 1. Requests for approved equivalents will only be considered when approved equivalent statements, used in reference to product

specifications, are specifically provided for within individual Specification sections.

2. The terms "or an approved equivalent", "approved equivalent", or similar statements, when used herein in connection with manufacturers' products, shall be understood to mean products that are equally effective and suitable for their intended use; based on the judgment of the Owner, whose decision shall be final.
3. Written requests for consideration by the Owner of approved equivalents may be submitted throughout the Project.
4. Time extensions and additional costs resulting from use of approved equivalent products will not be considered.

B. No Substitutions:

1. The terms "No Substitutions", "Alternative Products not Acceptable", or similar statements used in reference to product specifications, shall mean that only the specified product will meet the needs of the University and that no other products will be considered at any time before or during the Project.

C. Requirements and Procedures for Product Variations:

1. The Contract is based on the standards of quality established in the Contract Documents.
2. Substitution or approved equivalent revisions shall be made only with the prior written acceptance of the Owner.
3. All requests for substitutions or approved equivalents must be on the proposer's letterhead and shall be accompanied by complete specifications, samples, records of performance, certified copies of tests by impartial and recognized laboratories, and such other information as the Owner may request to prove the merit of the proposed revisions.
4. The Contractor assumes the responsibility for capacity, dimensions, clearance, etc., of the named manufacturer's particular item to assure that the revision meets the requirements.
5. The Contractor shall assume the cost of any redesign, in the form of changes to the Drawings, or for the Work of any other trades, or any other costs required to properly incorporate any revision associated with substitutions or use of approved equivalent products.
6. Final decisions as to the quality and suitability of proposed revisions will rest solely with the Owner and will be based on proof submitted.
7. When the Owner approves a substitution or approved equivalent proposed by the Contractor, it is with the understanding that the Contractor certifies that the article or material is equivalent to or better than that specified.

END OF SECTION 01 60 00

PART 1 GENERAL

1.01 PURPOSE

- A. Provide for an orderly, timely, and efficient completion of the Work for Owner.

1.02 SUBSTANTIAL COMPLETION

- A. Requirements for Substantial Completion: Contractor shall comply with all requirements for Substantial Completion identified in the General Conditions and other Contract Documents. Prior to Substantial Completion, Contractor must have constructed the Work in substantial accordance with the Contract Documents, and:
1. Certificate of Occupancy received from the AHJ.
 2. All elements of the Work must be operational and in good working order and condition, except for incidental punchlist Work;
 3. The fire and life safety systems, if any, must be tested and accepted;
 4. Any elevators must be operational, functioning, and in good working order and condition, and be fully approved for use;
 5. All mechanical, electrical, plumbing, telecommunications, security, and access control systems must operate and function in good working order and condition, including commissioning;
 6. The finish portion of the Work must be complete including but not limited to paint, trim, doors, partitions, cabinetry, floor coverings, ceilings, wall finish, and other finish surfaces, except for incidental punchlist Work;
 7. All roadway improvements, paving, sidewalks, parking areas, other street improvements, lighting, landscaping and irrigation must be complete;
 8. Utilities must be complete, connected, and operating normally;
 9. Contractor must have removed all construction facilities, temporary controls, and construction debris;
 10. Contractor must have completed training Owner's personnel on all operating instructions and submitted training DVDs; and
 11. Final cleaning.
- B. Prior to Substantial Completion Contractor shall request in writing that Owner grant Substantial Completion. Accompanying the request Contractor submit the following:
1. A list of all items remaining to be completed or corrected;
 2. Signed originals from authorities having jurisdiction of all certificates of compliance and final approval, as applicable;
 3. All system software files required by the Contract Documents, including

- but not limited to lighting and environmental controls;
 - 4. Revised Draft Operation & Maintenance manuals; and
 - 5. Draft Project Record.
- C. Upon satisfactory completion of the requirements for Substantial Completion, Owner shall prepare and forward to Contractor a letter of Substantial Completion. The letter will identify the date of Substantial Completion and include a punch list identifying all remaining incomplete Work. Contract warranties shall begin as of the date of Substantial Completion.

1.03 FINAL COMPLETION

- A. Requirements for Final Completion: Upon receipt of Contractor's written Notice that Contractor has inspected and completed punch list items and that the Work is ready for final inspection and acceptance, Owner will promptly make such inspection accompanied by Contractor. If Owner determines that some or all of the punch list items are not complete, Contractor shall be responsible to Owner for all costs, including re-inspection fees, for any subsequent inspection to determine completion of the punch list. When Owner finds all punch list items complete and the Work and Contract fully performed, Owner shall establish the date of Final Completion. Owner is not required to establish Final Completion until the following are complete:
- 1. Complete all requirements listed in the Contract Documents for Substantial Completion of the Work;
 - 2. Complete all remaining punch list items and remaining Work, and obtain approval by Owner that all Work is complete;
 - 3. Obtain permanent occupancy permits (if only a temporary occupancy permit was issued at Substantial Completion);
 - 4. Submit Project Record, any final property survey, and final Operation and Maintenance manuals (if not previously submitted) required by the Contract Documents;
 - 5. Deliver any required tools, spare parts, extra stock of material and similar physical items to Owner as required by the Contract Documents;
 - 6. Complete cleaning after completion of punch list;
 - 7. Submit executed warranties;
 - 8. Complete any required sustainability documentation for which Contractor is responsible;
 - 9. Submit a final comprehensive list of all Subcontractors of all tiers and suppliers for the Project; and
 - 10. Submit certification that materials used in the Work are "asbestos-free" and that all requirements of governing jurisdictions related to the Project have been addressed.

11. Final Project Record.

- B. Upon satisfactory completion of the requirements for Final Completion, Contractor shall submit a final Application for Payment.

1.04 FINAL ACCEPTANCE

- A. Requirements for Final Acceptance: Final Acceptance shall be established by Owner in writing. Owner shall not be obligated to accept the Project as complete before Final Completion has occurred and Contractor has submitted the following:
1. An affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which Owner or Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, except for any claims that are specifically identified on the affidavit (Affidavit of Payment of Debts and Claims, AIA form G706 or equivalent).
 2. A certificate or written statement evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 Days' prior written Notice has been given to Owner.
 3. Receipt of consent of surety, if any, to final payment (AIA form G707 or equivalent).
 4. If required by Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by. If a Subcontractor refuses to furnish a release or waiver required by Owner, Contractor may furnish a bond satisfactory to Owner to indemnify Owner against such lien. If such lien remains unsatisfied after payments are made, Contractor shall refund to Owner all money that Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.
 5. Provide copy to Owner of all "Affidavits of Wages Paid". Pursuant to RCW 39.12.040, an "Affidavit of Wages Paid" from Contractor and from each Subcontractor certified by the Industrial Statistician of the Washington State Department of Labor and Industries, with the fees paid by Contractor or Subcontractor.
- B. Contingent upon completion of all Affidavits of Wages Paid, the "Notice of Completion of Public Works Contract" form may be completed by Owner.

1.05 RETAINAGE

- A. Retainage must be held at least 45 Days following Final Acceptance. If there are either unpaid taxes or fees, or unsatisfied claims of lien against the retained percentage, disbursement of retainage funds will be made in accordance with Washington law.

- B. The retainage will be held and applied by Owner as a trust fund in the manner required by RCW 60.28. Release of the retainage will be processed in the ordinary course of business following Final Acceptance of the Work by Owner, provided no notice of lien has been given as provided in RCW 60.28, no claims have been brought to the attention of Owner, Owner has no claims under the Contract, and the requirements below have been met.
- C. Owner shall not release retainage until the following requirements have been satisfied.
 - 1. "Certificate of Payment of State Excise Taxes by Public Works Contractor": Following receipt of Owner's notice of completion and after determining that all taxes, increase and penalties due from Contractor have been paid, the Department of Revenue will issue this certificate to Owner.
 - 2. "Certificate of Payment of Contributions, Penalties and Interest on Public work Contract": Upon receiving a copy of Owner's notice of completion and after determining that Contractor is in compliance with the provisions of the Employment Security Act, the Employment Security Department will issue this certificate to Owner.
 - 3. "Certificate of Release": Upon receipt of Contractor's request for release and verification from its records that required premiums have been paid by Contractor and each Subcontractor, the Department of Labor and Industries will issue a statement to that effect.

END OF SECTION 01 70 00

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies administrative and procedural requirements for field engineering services, including but not limited to the following:
 - 1. Land survey Work; and
 - 2. Establishment of coordinated reference points for general building layout and location.

1.02 SUBMITTALS

- A. Project Record: Contractor shall submit a record of Work performed and record survey data as required by the Contract Documents.

1.03 QUALITY ASSURANCE

- A. Surveyor: Contractor shall engage a registered Professional Land Surveyor registered in the State of Washington to perform the required land-surveying services.
- B. Owner may furnish surveys describing physical characteristics, legal limitations, utility locations, and a legal description for the Project site. Contractor may rely on the information furnished by Owner but must exercise proper precautions to ensure the safe performance of the Work. Contractor shall assume that the locations of any underground or hidden utilities, underground tanks, plumbing, or electrical runs indicated in the surveys or Contract Documents are shown in approximate locations, but Contractor is responsible for verifying the location of all utilities impacted by the Work. Additionally, Owner may make available to Contractor the results of investigations of hidden or subsurface conditions for the convenience of Contractor. While Contractor may rely upon such investigation results, there is no guarantee, express or implied, that the conditions indicated are representative of those existing throughout the Project site, or that unforeseen developments may not occur. Contractor is solely responsible for interpreting the information and extrapolating beyond the location, including each individual boring, test pit, or other locations.

1.04 EXAMINATION

- A. Identification: Contractor shall verify the location of benchmarks and control points provided by Owner.
- B. Contractor shall verify layout information on Drawings in relation to the property survey and existing benchmarks before proceeding to layout the Work.

Contractor shall also locate and protect existing benchmarks and control points and preserve permanent reference points during construction.

1. Do not change or relocate benchmarks or control points without prior written approval of Owner. Promptly report lost or destroyed reference points and requests to relocate reference points because of changes in grades or locations.
 2. Promptly replace lost or destroyed Project control points. Base replacements on the original survey control points.
- C. Contractor shall establish and maintain a minimum of two permanent benchmarks at the Project site.
1. Record benchmark locations, with horizontal and vertical data, on Project Record.
- D. Existing utilities and equipment: The existence and location of underground and other utilities are not guaranteed. Before beginning the Work, Contractor shall investigate and verify the existence and location of underground and other utilities (including irrigation and snow melt systems).
1. Prior to construction, verify the locations and invert elevation at points of connection sanitary sewer, storm sewer, and water service piping.

1.05 PERFORMANCE

- A. Contractor shall work from lines and levels established by the property survey; establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to locate each element of the Project; and calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.
1. Advise entities engaged in Work activities of marked lines and levels provided for their use.
 2. As construction proceeds, check every major element for line, level, and plumb.
- B. Surveyor's Log: Contractor shall maintain a surveyor's log of control points and other survey Work. Make this log available to Owner for reference.
1. Record deviations from required lines and levels and advise Owner when deviations that exceed indicated or recognized tolerances are detected. On Project Record, record deviations that are accepted and not corrected.
 2. Following completion of foundation walls, major site improvements, and other Work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and site Work.

- C. Site Improvements: Contractor shall locate and lay out site improvements, including pavement, stakes for grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Existing Utilities: Contractor shall furnish information necessary to adjust, move, or relocate existing structures, utility poles, lines, services, or other appurtenances affected by construction. Contractor shall coordinate with local authorities having jurisdiction.
- E. Contractor shall record accurately on the Project Record the principal metes, bounds, lines, and levels of the Project.

END OF SECTION 01 71 23

PART 1 GENERAL

1.01 SUMMARY

- A. This Section describes the waste management and recycle management criteria for debris and solid waste generated as part of the Work.
- B. Contractor shall be responsible for sorting, segregating, and placing designated waste materials into containers provided by Owner. Contractor shall be responsible for segregating and disposing all unacceptable and dangerous wastes as defined below.
- C. Waste that is disposed of by Contractor shall be in accordance with all applicable local, state, and federal regulations, including WAC 173-350, Solid Waste Handling Standards, and WAC 173-303, Dangerous Waste Regulations.

1.02 DEFINITIONS

- A. Construction Waste: Waste resulting from the Work.
- B. Dangerous Waste: Solid waste designated in WAC 173-303 and/or 40 CFR. As used in this Section, the words "dangerous waste" will refer to the full universe of wastes regulated by WAC 173-303 and 40 CFR.
- C. Demolition Waste: Largely inert waste, resulting from the selective demolition of buildings, roads and other man-made structures such as cured concrete, asphaltic compounds, brick and masonry, ceramic, glass, steel, and aluminum, and non-inert materials such as clean wood, composition roofing and roofing paper, and minor amounts of metal. Plaster (i.e., sheetrock or plaster board) or any other material, other than clean wood, that is likely to produce gases or leachate during its decomposition process and asbestos waste are not considered to be demolition waste.
- D. Land Clearing Waste: Natural vegetation and clean soils from clearing and grubbing land for development such as stumps, brush, weeds, tree branches, tree bark, mud, dirt, sod and rocks.
- E. Recycle/Recycling: The process of separating waste materials for remanufacturing or reprocessing into usable or marketable materials. Examples of recycling include separating wood off-cuts for recycling by a wood processor into paper pulp, or separating cardboard, plastic, beverage containers, or miscellaneous metals for recycling.
- F. Reuse: To use a construction waste material again in roughly its same form. Materials can be reused on-site or on other projects off-site. Examples of reuse include removing a hardwood floor and reinstalling it in a new project, or using soil from one site as fill on another site.
- G. Salvage: To remove a construction waste material or equipment from an existing

building for reuse on-site or reuse on other projects off-site. Items to be salvaged shall be designated by Owner for removal and delivery to Owner.

- H. Unacceptable Waste: All waste not authorized for disposal by Owner. This includes any waste that is now or hereafter defined by federal law or by the governing jurisdiction as radioactive, dangerous, hazardous or extremely hazardous waste, unsanitary waste, and vehicle tires in excess or those permitted to be disposed of by the laws of the governing jurisdiction. It does not include any waste destined for salvage, recycling, or general demolition.
- I. Waste: All solid waste generated within the limits of the Project, or extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable and recyclable materials, masonry, and concrete.
- J. Waste Management Plan: A Project-specific plan for the salvage, collection, transportation, recycling, and disposal of the waste generated at the Project site. A waste management plan includes procedures for separating, storing, and transporting waste and includes methods to assure proper implementation of the plan.

1.03 WASTE MANAGEMENT PLAN

- A. Draft Waste Management Plan: Per the Pre-Construction Submittal Requirements of Section 01 33 00, Contractor shall submit to Owner a Draft Waste Management Plan. The Draft Plan shall contain the following:
 - 1. List of materials to be salvaged, materials to be recycled, and materials to be disposed of as solid waste, and dangerous waste.
 - 2. General material handling methods, including segregation and sorting, and placing solid waste into designated containers, on-site storage, and any special procedures for removing and protecting materials.
 - 3. Plan for communicating salvage and recycling requirements on the Project.
 - 4. Dangerous waste identification, accumulation, and disposal management procedures.
 - 5. Materials to be sorted, salvaged, and recycled:
 - a. At a minimum, the following types of materials in reusable condition shall be salvaged and sorted. Contractor shall remove and deliver to the Owner at designated location on the Pullman campus.
 - 1) Traffic Signs
 - 2) Surplus building materials (new, leftover, unwanted). Review with Owner for clarification.
 - b. At a minimum, the following types of materials shall be sorted and included for recycling:
 - 1) All metals (from banding, stud trim, ductwork, piping, rebar,

- roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze);
- 2) Beverage containers;
 - 3) Cardboard (from supplies and packaging);
 - 4) Clean wood (all unpainted, untreated wood scrap including pallets and engineered wood);
 - 5) Mixed office paper (including blue prints);
 - 6) Film plastic (from shrink wrap and other packaging, and sheeting used as protection or erosion control); and
 - 7) Plate glass.
- c. With the exception of unacceptable waste, all materials not designated for salvage or recycle per Paragraph 1.03(A)(5) above, may be co-mingled and disposed of as waste.
- B. Dangerous Waste Management:
1. Contractor is responsible for all dangerous waste generated during the Project shall be identified, accumulated and disposed in accordance with WAC 173-303. Contractor generated dangerous waste must be shipped for disposal within 90 Days of generation.
 2. Contractor may accumulate dangerous waste in accordance with WAC 173-303 and Washington Department of Ecology Technical Information Memorandum 94-120, Satellite Accumulation. If Contractor accumulates dangerous waste in volume greater than 55 gallons or acutely hazardous waste in a volume greater than one quart, Contractor shall establish and operate a "90-Day" accumulation area in accordance with WAC 173-303.
 3. Contractor shall dispose dangerous waste only through vendor(s) approved by Owner. Contractor shall arrange all dangerous waste shipments. Utilization of the vendor and facilities included in the State of Washington Hazardous Waste Disposal contract is authorized. Any other proposed vendor(s) and/or facilities are subject to audit by Owner, prior to utilization. Contractor shall pay for said audits. Contractor shall coordinate with Owner's Environmental Health & Safety (EH&S) Department for transportation and disposal of all Project generated dangerous waste. EH&S will sign all Uniform Hazardous Waste Manifests.
- C. Final Waste Management Plan: Once Owner has reviewed the draft Waste Management Plan and responded with comments or corrections, Contractor shall submit a final plan within 14 Days.
- PART 2 PRODUCTS – NOT USED
- PART 3 EXECUTION

3.01 WASTE CONTAINMENT

- A. Contractor will provide and service containers for all wastes.
- B. Contractor shall provide separate waste containers for and properly dispose of all unacceptable waste, including dangerous waste, in accordance with applicable law.

3.02 CONTAMINATION OF WASTE

- A. Contractor shall take extraordinary care to ensure construction wastes are properly sorted, segregated, and placed within the correct containers.
- B. Should any waste containers designated for salvage, recycle, or general disposal be cross-contaminated with dangerous or unacceptable waste, Contractor shall pay all costs of legally disposing the contaminated waste.
- C. Project progress meetings shall include review of construction waste management as an agenda item.

END OF SECTION 01 74 19

PART 1 GENERAL

1.01 PURPOSE

- A. Contractor shall submit advance/draft electronic of Operation & Maintenance manuals (O&Ms) at or immediately following the 80% Application for Payment. Subsequent Applications for Payment will not be processed until an advance/draft copy of the O&Ms has been submitted for review.
- B. Contractor shall submit a final draft of O&Ms on or before Substantial Completion and provide training of Owner's staff in the operation and maintenance of the facility.

1.02 PROCEDURES

- A. Together with a request for Substantial Completion, Contractor shall provide one revised draft electronic version of O&Ms.
- B. To achieve Final Completion, Contractor shall submit :
 - 1. Two final copies of O&Ms;
 - 2. A text-searchable PDF electronic file of the O&Ms;
 - 3. Separate Test & Balance Reports and Telecommunications Test Reports in an independent three ring binder;
 - 4. A text-searchable PDF electronic file of the Test & Balance Reports and Telecommunications Test Reports.

PART 2 PRODUCTS

2.01 O&M MANUAL MATERIALS

- A. O&M Manuals shall be bound into 3-ring binders (three sets) with the cover and spine to be composed and laid out per the cover page template on the last page of this Section.
- B. The maximum thickness for each manual shall be 3". Multiple manual sets shall be organized by:
 - 1. General,
 - 2. Vertical Transportation,
 - 3. Mechanical,
 - 4. Electrical, and
 - 5. Other (Laboratory Equipment, Special Equipment, etc.).

- C. Paper shall be 8 1/2" x 11", 20 lb. white paper. Divisions within volumes are to be accomplished and annotated with permanently imprinted tabs (insertable indexes are not permitted) which indicate Specification Section numbers only.
- D. Copies must be legible. Facsimile transmission copies are not acceptable. Original equipment manufacturer (OEM) printed material is preferred.

PART 3 EXECUTION

3.01 PRODUCTION

- A. O&Ms are to be as follows:
 - 1. Table of Contents – a listing of the contents of all volumes. This table of contents shall be inserted at the beginning of each volume in the set.
 - a. Identify Contractor, include name, address, phone and fax number, and provide a contact name.
 - 2. Subcontractor List – a list or spreadsheet, organized by Specification Section, of all suppliers and Subcontractors of all tiers who performed Work on the Project. Include the name, address, phone and fax number of Subcontractor or supplier, the Specification Section, and the description of the Work. When Subcontractors perform Work of more than one Specification Section, provide a separate listing of each Specification Section. This listing shall be at the beginning of volume #1 only.
 - a. Written certification from Contractor attesting that no asbestos containing products have been incorporated into the Work.
 - 3. Warranty List – a list or spreadsheet containing Contractor's one-year correction period obligation and all extended (greater than one-year) warranties, organized by Specification Section that indicates:
 - a. Item Description (include here special warranty numbers or codes),
 - b. Length of warranty,
 - c. Specification Section, and
 - d. Contractor's contact information, followed by physical copies of the Contractor's one-year correction period obligation and all extended warranties. Note that 1-year warranties from Subcontractors are not to be bound into each volume of the O&Ms. This warranty list and attendant warranties shall be at the beginning of volume #1 only, immediately following the asbestos certification.
 - 4. Provide data as outlined in each specification section.
- B. Original equipment manufacturer (OEM) information is required to be a part of all equipment information within the O&Ms.

- C. Shop Drawings and product data initially submitted for acceptance are generally not acceptable for O&M use (one notable exception is snow melting cable layout drawing – a manufacturer detailed item). Routine Project components such as asphalt, concrete, pipe, fittings, conduit, etc., are not to be included in O&Ms.

END OF SECTION 01 78 23
(O&M cover and spine data on next page)

Facility #708, Sidewalks

Shared Use Path on SR270 to Stadium Way 2023

General O&M Manual

Vol. X of Y

(Spine and Cover)

PART 1 GENERAL

1.01 PURPOSE AND PROCEDURE

- A. Contractor shall submit draft Project Record drawings on or before Substantial Completion. Requests for Substantial Completion will not be considered if submission of Project Record drawings has not occurred.
- B. Contractor shall submit final Project Record drawings before Final Completion may be achieved.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Project Record drawings are to be red-line markings on original Drawings which clearly indicate the as-built dimensions (both horizontally and vertically) for all installed Work.
- B. Identify on Project Record drawings all underground utilities encountered during the Work. Locate these utilities both horizontally and vertically and tie the dimension string(s) back to permanent and visible structures.
- C. Clearly label each sheet with the words "PROJECT RECORD DRAWINGS."
- D. Do not affix requests for information (RFIs), change proposals (CCPs) or architectural supplemental instructions (ASIs) to the Project Record drawings. If all or part of a Drawing has been modified, it is acceptable to affix the revised layout over top of the original. However, all dimensions that have been modified are to be red-lined or yellow highlighted.
- E. Copies must be legible.

PART 3 EXECUTION

3.01 PRODUCTION

- A. During construction, Project Record information will be reviewed not less than monthly concurrent with the monthly review of the draft Application for Payment.

END OF SECTION 01 78 39

PART 1 GENERAL

1.01 DESCRIPTION

- A. Owner has set the following indoor air quality requirements for site operations on the Project, within the limits of the Progress Schedule, Contract Sum, and available materials, equipment, products, and services. These include:
 - 1. Protect workers on the site from air quality problems during construction.
 - 2. Prevent indoor air quality problems in the completed facility.
 - 3. Prevent indoor air quality problems in adjacent facilities.
- B. To achieve these requirements, Contractor shall develop an "Indoor Air Quality (IAQ) Management Plan" for this Project.
- C. Comply with current LEED Reference Guide.

1.02 IAQ MANAGEMENT PLAN MANAGER

- A. Contractor shall identify an IAQ Management Plan Manager who will be responsible to monitor construction activities to ensure that the requirements of the IAQ Management Plan are met. The IAQ Manager may also be the Contractor's Quality Control Manager. The IAQ Manager will be responsible for the following:
 - 1. Draft and submit the IAQ Management Plan to Owner for acceptance.
 - 2. Document IAQ Management Plan progress on a weekly basis.
 - 3. Conduct meetings as required with all participants in the construction process to communicate the IAQ procedures and understand the importance of the requirements of the IAQ Management Plan. If necessary, post signs to ensure workers' safety.
 - 4. Identify IAQ problems and institute remedial action as necessary.
 - 5. Be present at regular Progress Meetings, as appropriate, and be responsible for providing a monthly written status report as it relates to IAQ for the Project and be prepared to discuss construction related IAQ procedures currently in effect.

1.03 IAQ MANAGEMENT PLAN

- A. Draft IAQ Management Plan: Submit a Draft IAQ Management Plan within 14 Days after Notice to Proceed, which contains preliminary descriptions of the following procedures for which Contractor is responsible (initial installation, verification that element(s) are in place, daily inspection and upkeep, and removal):

1. List of indoor air quality protective measures to be instituted at Project site, including HVAC system protection during construction and any other control measure applicable to the Project;
 2. A plan and schedule for inspection and maintenance of indoor air quality measures;
 3. Installation sequencing for porous materials, including paint;
 4. Measures to be employed to protect ducts and stored on-site or installed absorptive materials from moisture damage;
 5. Type of filtration media used during construction;
 6. Cleanup of contaminated components after construction.
- B. The Draft IAQ Management Plan shall meet or exceed the minimum requirements of the current Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines.
- C. Final IAQ Management Plan: After review and comment on the "Draft IAQ Management Plan," Contractor shall submit a "Final IAQ Management Plan" that includes the finalized written procedures for above noted elements. This final plan shall address all review comments noted on the draft submittal and be submitted prior to the commencement of construction.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 IAQ MANAGEMENT PLAN IMPLEMENTATION

- A. Contractor shall implement and maintain the approved IAQ Management Plan for the duration of the Project and update procedures at any time due to unanticipated building conditions. Contractor shall:
1. Use temporary filtration media during construction to protect HVAC at each return air grille; filtration media shall have a Minimum Efficiency Reporting Value (MERV) of 8 as determined by ASHRAE 52.2 - 1999. Isolate the return side of the HVAC system from the surrounding environment as much as possible. Return side shall have the heaviest Work areas dampered off and all return system openings sealed with plastic. Return side shall be shut down and sealed whenever possible.
 2. Avoid the use of products, materials and operations that would cause IAQ problems or concerns.
 3. Protect the ventilation system components (equipment and ductwork) from contamination, and provide cleaning of the ventilation components, including ductwork exposed to contamination during construction. Protect during transit and installation.
 4. Provide ventilation as may be necessary to protect workers' health and avoid the accumulation of volatile compounds, dust and other harmful

airborne contamination.

5. Provide weekly reports and photographs of construction IAQ management measures such as protection of ducts and stored or installed absorptive materials. In each report, describe and illustrate IAQ measures (installation, effectiveness, upkeep, etc.) during construction along with a description of the SMACNA approach employed.
 6. Provide data sheets of filtration media used during construction and installed prior to building occupancy.
 7. During installation of carpet, resilient flooring, paints, furnishings, and other VOC emitting products, provide supplemental (spot) ventilation for at least 72 hours after Work is completed and describe these activities in the weekly reports.
- B. Contractor shall conduct regular inspection and maintenance of indoor air quality measures, including ventilation system protection and ventilation rate.
- C. Contractor shall use low-toxic cleaning supplies for surfaces and equipment.
- D. When dry sanding for gypsum board assemblies, Contractor shall provide the following protection:
1. Isolate the space;
 2. Provide plastic sheet separation during sanding;
 3. Close and seal all air system devices and ductwork; and
 4. Sequence the Work to avoid contamination of other spaces with gypsum dust.

3.02 VENTILATION OF CONSTRUCTION FUMES

- A. When hazardous chemicals, mineral-spirit based paints, adhesives, or other similar materials are used, the Contractor shall exhaust toxic, noxious, or odor producing fumes from the building in a manner approved by Owner. Contractor's method of exhaust shall ensure the safety of building occupants and pedestrians in and around the Project site. All supply and return air ductwork within the construction area shall be capped air-tight to prevent distribution of fumes.

3.03 COMPLETION PROCEDURES

- A. Remove all IAQ measures as well as signs, framing, and supports at completion of Project.

END OF SECTION 01 81 19

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Commissioning is a systematic process of ensuring that all building systems perform interactively according to the design intent and Owner's operational needs. This begins in the design phase and continues through construction. The commissioning process incorporates the traditionally separate functions of system documentation, equipment startup, control system calibrations, testing and balancing, performance testing, and training. Commissioning during the construction phase is intended to achieve the following specific objectives:
 - 1. Verify that applicable equipment and systems are installed according to the Contract, manufacturer's recommendations, and industry accepted standards and that they receive adequate operational checkout by installing contractors.
 - 2. Verify and document proper functional performance of equipment and systems.
 - 3. Document all non-performing equipment and systems and track corrective actions through to final resolution.
 - 4. Ensure compliance with State Energy Code Requirements (WA NREC Latest Revision).
- B. Work includes the completion of formal commissioning procedures on selected equipment and systems. Commissioning procedures will be designed and coordinated under the direction of a Commissioning Agent (CA). Contractor is not responsible for hiring the CA. The CA will work directly for Owner. Contractor is responsible for coordinating and cooperating with the CA as necessary to complete the training and commissioning processes.

1.02 DEFINITION OF TERMS

- A. Commissioning Agent (CA): Is an independent third-party consultant under contract with Owner. CA responsibilities are listed in Subsection 1.03 for information, reference, and clarification.
- B. Installation Verification Audit: Includes the on-site inspection and review of related system components for conformance to the Contract. The CA will check for proper systems installation and verify systems readiness for function testing. Noted deficiencies will be documented and must be satisfactorily resolved prior to continuing with commissioning on the affected component or system.
- C. Commissioning Plan: Outlines the commissioning process. Provides a brief overview of each start-up and functional test to be performed and identifies the responsible Contractor and/or supplier. It also outlines the responsibilities of all personnel to the commissioning process, estimates the commissioning schedule and provides sample Installation Verification, Start-Up, and Functional Performance Test Procedures and related documentation for information.

- D. Start-Up Testing: Initial test checkout of component or systems completed prior to functional performance testing. The start-up tests verify that the equipment is installed and operating properly per the Contract.
- E. Testing, Adjusting and Balancing (TAB): Testing, adjusting and balancing is a process where heating and air conditioning systems are tested against design standards, adjusted for maximum efficiency, and balanced to provide optimum performance. The Work typically covers balancing and adjusting air and water distribution in areas of the building served by an HVAC system, and verification and adjustment of heating and cooling loads to insure proper indoor environmental conditions. Areas that do not meet the design standards are referred to the appropriate party for correction. Reports are prepared documenting performance and compliance with design standards.
- F. Function Performance Testing: Includes the documented testing of individual components and equipment under actual operating conditions. Final performance commissioning of systems will begin only after Contractor certifies that system components are 100% complete, start-up test results have been accepted, and the CA agrees that systems are ready for functional testing.
- G. Commissioning Issues Log: Generated by the CA, includes deficiencies discovered during the commissioning process. The log identifies the responsible contractor, current disposition of issues, and the date of final resolution as confirmed by the CA. Deficiencies are defined as those issues where products, execution or performance do not satisfy the Contract, the design intent or Owner's need.
- H. Final Commissioning Report: Includes the overall final commissioning document, prepared by the CA, which details the actual commissioning procedures performed, inspection and testing results, and the final version of the Commissioning Issues Log indicating that all issues discovered through the commissioning process have been verified as resolved.

1.03 COMMISSIONING AGENT'S DUTIES AND RESPONSIBILITIES

- A. Meet and communicate with the Owner's Designated Representative, Contractor, equipment representatives, and others as necessary to facilitate the commissioning process.
- B. Write the commissioning plan.
- C. Review commissioning-related Specifications, submittals, and Contract Documents. Communicate noted deficiencies and concerns to Owner.
- D. Review the Owner Project requirements and Basis of Design documents to insure Owner's intent and design requirements are met.
- E. Chair controls integration meetings to ensure acceptance of control strategies and determine methods to achieve the required sequence of operation.

- F. Develop installation and start-up checklists from:
 - 1. Information in the Contract Documents; and
 - 2. Information from equipment manufacturers as provided by Contractor.
- G. Coordinate functional testing procedures with Contractor and integrate into Progress Schedule.
- H. Develop detailed and specific inspection and functional testing procedures for equipment and systems to be commissioned.
- I. Confirm completion of all static piping and duct tests and flushing and cleaning as performed by Contractor.
- J. Complete a detailed physical inspection and visual checkout of commissioning related equipment and components. Document specific deficiencies for resolution.
- K. Confirm completion of equipment and systems start-up procedures as performed by Contractor and equipment representatives. Verify appropriate documentation is completed and provided for inclusion in the final commissioning report. Record noted deficiencies.
- L. Schedule and coordinate the final on-site functional testing process. Complete a documented checkout of every specified operating parameter and mode. Document deficiencies and resolutions.
- M. Review Contractor-provided O&Ms. Ensure the manuals provide in-depth, Project-specific information. Provide formal comment.
- N. Work with Owner, Architect/Engineer, if any, and Contractor to satisfactorily resolve outstanding issues.
- O. Provide Owner with final, complete, and documented verification to ensure commissioned systems are 100% operational per Contract, prior to Owner's acceptance. Exceptions may be made for seasonal commissioning.
- P. Perform seasonal commissioning as required to verify proper system operation during peak heating and cooling seasons.
- Q. Complete all other items noted in Contract as Commissioning Agent responsibilities.
- R. Provide a final Commissioning Report to Owner.

1.04 DUTIES AND RESPONSIBILITIES FOR COMMISSIONING

- A. The commissioning process will require the active participation of persons qualified to represent the following interests:

1. Owner,
 2. Contractor,
 3. Equipment manufacturer's representatives,
 4. Mechanical Subcontractor,
 5. HVAC Subcontractor,
 6. Controls Subcontractor,
 7. TAB Subcontractor,
 8. Electrical Subcontractor, and
 9. Others as appropriate.
- B. The CA will coordinate, schedule, and oversee the final functional performance commissioning process. Participants shall include in their contracts all costs necessary to participate in and complete the commissioning process.
- C. Contractor will assure the participation and cooperation of Subcontractors and coordinate with Owner and Architect/Engineer, as required for the commissioning process.

Owner will assure the participation of its chosen representatives.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 CONTRACTOR RESPONSIBILITIES FOR COMMISSIONING

- A. Contractor shall provide material, equipment, and tools to facilitate completing the functional performance testing process. The CA will provide specialized and calibrated test equipment to perform the calibration and functional performance testing.
- B. Contractor shall budget and provide sufficient time and qualified personnel to participate on-site in this process until the process is successfully completed and all deficiencies have been corrected or otherwise resolved.
- C. Contractor shall provide training to Owner. Specified training on related systems and equipment operation and maintenance shall only commence after final performance commissioning is successfully completed, and systems are verified by the CA to be 100% complete and functional.
- D. Contractor shall reimburse the CA for repeated test failures. After a second failed start-up or functional performance test, the CA and Owner shall be entitled to additional compensation for time and expenses involved with re-testing. The compensation shall be at published company billing rates.
- E. Owner will not accept equipment and systems, and Owner will generally not make final payment, until all equipment and systems have been successfully

commissioned and all specified requirements have been satisfied.

- F. Include a line item for commissioning in the Schedule of Values. Ensure sufficient costs are included for Contractor's expenses related to all commissioning tasks.

END OF SECTION 01 91 00

SECTION 02 41 00 – DEMOLITION

PART 1 - GENERAL

1.1 DESCRIPTIONS

- A. Work under this Section includes providing selective demolition of part of the existing facility shown on the drawing and as specified herein.
- B. Prior to performing any demolition work, the area to be demolished shall be measured and agreed upon by the Engineer and Contractor. If demolition occurs prior to this measurement and agreement with the Engineer, the Engineer will measure only the area that, in the opinion of the Engineer, should have been the limits of demolition. Repairs to areas outside of these demolition limits, as determined by the Engineer, shall be replaced or reconstructed at no cost to the Owner.

1.2 CONDITION OF SITE

- A. Owner assumes no responsibility for actual conditions of items to be demolished. Conditions existing at time of commencement of contract will be the responsibility of the Contractor.

1.3 PROTECTION OF FACILITIES

- A. Protect from damage existing finish work that is to remain in place that becomes exposed during demolition operations.
- B. Protect adjacent areas with suitable coverings when necessary to prevent surface damage, including protecting existing concrete and asphalt surfaces from concrete staining.
- C. Remove protections at completion of work.

1.4 ENVIRONMENTAL CONTROLS

- A. Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.

1.5 PERMITS

- A. Obtain any permits for electrical or plumbing demolition that may be required for the Work at no additional costs.

PART 2 - PRODUCTS NOT USED

PART 3 - EXECUTION

3.1 INSPECTION

- A. Prior to commencement of selective demolition work, inspect areas in which work will be performed. Photograph existing conditions of surrounding area that could be misconstrued as damage resulting from selective demolition work.

3.2 PREPARATION

- A. Provide shoring, bracing, or support to prevent movement, settlement, or collapse of adjacent facilities to remain.

3.3 DEMOLITION

- A. Demolish concrete flatwork only in areas shown on the drawings to be removed. However, the exact location may be adjusted in the field if required to avoid existing obstacles.
 - 1. The line to be cut shall be marked on the surface along a string-line or straight edge with a marker that will not wash away from the action of the saw's cooling water. All cutting lines shall be marked along straight line prior to cutting.
 - 2. Furnish and operate a power drive, self-propelled wheel mounted pavement sawing machine. The saw blade shall be either a wet cutting or dry cutting type. The depth of the saw shall be controlled by graduated positions set on the machine.
 - 3. Concrete and asphalt slabs shall be cut by saw cutting the slab to full slab depth with one pass of the saw following exactly along the marked cutting line.
- B. Where large power driven saws cannot be operated close enough to the end of the slab to completely cut it (i.e. at an abutting wall or foundation) use power driven impact tools and grinders to remove the slab and form a smooth neat joint.
- C. Where slab thicknesses exceed the maximum depth of the cutting machine, cut a line as deep as possible with the machine and use power driven impact tools and grinders to remove the slab and form a smooth neat joint.
- D. Remove all foundations shown to be removed. Do not bury unless authorized by the Engineer at the time of demolition.

3.4 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove debris, rubble and other materials resulting from demolition work. Haul all materials from demolition to a disposal site obtained by the Contractor.

3.5 CLEANUP AND REPAIR

- A. Upon completion of demolition work, remove tools, equipment, and demolished materials from site.

3.6 REPAIR

- A. Repair demolition performed in excess of that required. Return structures and surfaces to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION 02 41 00

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Furnish all labor, materials, and equipment required for the construction of cast-in-place concrete as shown on the drawings and as specified herein.

1.2 DEFINITIONS

- A. Cold Weather: When the ambient temperature is below 40 degrees Fahrenheit or is approaching 40 degrees Fahrenheit and falling.
- B. Contractor's Licensed Design Engineer: Individual representing Contractor who is licensed to practice engineering as defined by statutory requirements of professional licensing laws in state or jurisdiction in which Project is to be constructed.
- C. Defective Area: Surface defects that include honeycomb, rock pockets, indentations, and surface voids greater than 3/16-inch deep, surface voids greater than 3/4-inch in diameter, cracks in liquid containment structures and below grade habitable spaces that are 0.005-inch wide and wider, and cracks in other structures that are 0.010-inch wide and wider, spalls, chips, embedded debris, sand streaks, mortar leakage from form joints, deviations in formed surface that exceed specified tolerances and include but are not limited to fins, form pop-outs, and other projections. At exposed concrete, defective areas also include texture irregularities, stains, and other color variations that cannot be removed by cleaning.
- D. Exposed Concrete: Concrete surface that can be seen inside or outside of structure regardless of whether concrete is above water, dry at all times, or can be seen when structure is drained.
- E. Hot Weather: As defined in ACI 305.1.
- F. Hydraulic Structure: Liquid containment structure.
- G. New Concrete: Less than 60 days old.
- H. Slurry Mixture: Mixture of sand, 3/8-inch maximum nominal aggregate size, cement, and water for wall construction joints with waterstop.

1.3 REFERENCE SPECIFICATIONS

- A. ACI 211.1 – Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete
- B. ACI 301 – Specifications for Structural Concrete

- C. ACI 302.1R – Guide for Concrete Floor and Slab Construction
- D. ACI 304R – Guide for Measuring, Mixing, Transporting, and Placing Concrete
- E. ACI 305R – Guide to Hot Weather Concreting
- F. ACI 306R – Cold Weather Concreting
- G. ACI 308R – Guide to Curing Concrete
- H. ACI 318 – Building Code Requirements for Structural Concrete and Commentary
- I. ASTM C31 – Standard Practice for Making and Curing Concrete Test Specimens in the Field
- J. ASTM C39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- K. ASTM C94 – Specification for Ready-Mixed Concrete
- L. ASTM C109 – Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-inch Cube Specimens)
- M. ASTM C143 – Standard Test Method for Slump of Hydraulic Cement Concrete
- N. ASTM C150 – Specification for Portland Cement
- O. ASTM C157 – Standard Test Method for Length Change of Hardened Hydraulic Cement Mortar and Concrete
- P. ASTM C171 – Specification for Sheet Materials for Curing Concrete
- Q. ASTM C172 – Standard Practice for Sampling Freshly Mixed Concrete
- R. ASTM C231 – Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
- S. ASTM C260 – Specification for Air-Entraining Admixtures for Concrete
- T. ASTM C309 – Specification for Liquid Membrane-Forming Compounds for Curing Concrete
- U. ASTM C494 – Specification for Chemical Admixtures for Concrete
- V. ASTM C618 – Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
- W. ASTM C881 – Specification for Epoxy-Resin-Base Bonding Systems for Concrete
- X. ASTM C1059 – Specification for Latex Agents for Bonding Fresh to Hardened Concrete

- Y. ASTM C1064 – Standard Test Method for Temperature of Freshly Mixed Hydraulic Cement Concrete
- Z. ASTM C1107 – Specification for Packaged Dry, Hydraulic Cement Grout (Nonshrink)
- AA. ASTM C1240 – Specification for Silica Fume Used in Cementitious Mixtures
- BB. ASTM C1315 – Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete
- CC. ASTM C1602 – Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
- DD. ASTM D1751 – Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
- EE. ASTM E1155 – Standard Test Method for Determining F(F) Floor Flatness and F(L) Floor Levelness Numbers
- FF. ASTM E1643 – Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs
- GG. ASTM E1745 – Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs
- HH. IBC – International Building Code

1.4 JOB CONDITIONS

- A. In hot and cold weather, comply with the requirements of ACI 305 and 306.
- B. Do not place concrete on frozen ground.
- C. Unless adequate protection is provided, do not place concrete during rain, sleet, or snow.
- D. Do not allow rainwater to increase mixing water or damage surface finish.

1.5 SUBMITTALS

- A. General: All submittals shall be submitted in accordance with the requirements of Section 01 33 00 – Submittal Procedures.
- B. Mix Design: Submit mix design to be used for each class of concrete.
 - 1. Submit location of materials source, admixtures to be used, and other related data
 - 2. Submit test reports showing suitability of aggregates used in concrete mixes.
 - 3. Test results of successful ASR mitigation using ASTM C1567.

- C. Detailed plan for curing and protection of concrete: Detailed plan for curing and protection of concrete placed and cured in cold weather. Plan shall include, but not be limited to, the following:
1. Procedures for protecting sub grade from frost and accumulation of ice or snow on reinforcement, other metallic embeds, and forms prior to placement.
 2. Procedures for measuring and recording temperatures of reinforcement and other embedded items prior to concrete placement.
 3. Methods for temperature protection during placement.
 4. Types of covering, insulation, housing, or heating to be provided.
 5. Curing methods to be used during and following protection period.
 6. Use of strength accelerating admixtures.
 7. Methods for verification of in-place strength.
 8. Procedures for measuring and recording concrete temperatures.
 9. Procedures for preventing drying during dry, windy conditions.
- D. Detailed plan for hot weather placements including curing and protection for concrete placed and cured in hot weather. Plan shall include, but not be limited to, the following:
1. Procedures for measuring and recording temperatures of reinforcement and other embedded items prior to concrete placement.
 2. Use of retarding admixture.
 3. Methods for controlling temperature of reinforcement and other embedded items and concrete materials before and during placement.
 4. Types of shading and wind protection to be provided.
 5. Curing methods, including use of evaporation retardant.
 6. Procedures for measuring and recording concrete temperatures.
 7. Procedures for preventing drying during dry, windy conditions.
- E. Informational Submittals:
1. Preinstallation Conference minutes.
 2. Manufacturer's application instructions for bonding agent and bond breaker.
 3. Manufacturer's Certificate of Compliance to specified standards:

- a. Bonding agent.
 - b. Bond breaker.
4. Statement of Qualification:
 - a. Batch Plant: Certification as specified herein.
 - b. Mix designer.
 - c. Installer.
 - d. Testing agency.
5. Field test reports.
6. Recorded temperature data from concrete placement where specified.
7. Tightness test results.
8. Concrete Delivery Tickets:
 - a. For each batch of concrete before unloading at Site.
 - b. In accordance with ASTM C94, including requirements 14.2.1. through 14.2.10.
 - c. Indicate amount of mixing water withheld and maximum amount that may be permitted to be added at Site.

1.6 QUALITY ASSURANCE

- A. Concrete construction shall conform to requirements of ACI 117, ACI 301, & ACI 318 except as modified herein.
- B. Qualifications:
 1. Batch Plant: NRMCA Program for Certification of Ready-Mixed Concrete Production Facilities or approved equivalent program.
 2. Mix Designer: Person responsible for developing concrete mixture proportions certified as NRMCA Concrete Technologist Level 2 or DOT certified mix designer in jurisdiction of the Work. Requirement may be waived if individual is Contractor's Licensed Design Engineer.
 3. Testing Agency: Unless otherwise permitted, an independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C1077 and ASTM E329 for testing indicated.

- a. Where field testing is required of Contractor, personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
 - b. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade 1. Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician – Grade II.
- C. Preinstallation Conference:
 - 1. Required Meeting Attendees:
 - a. Contractor, including pumping, placing and finishing, and curing subcontractors.
 - b. Ready-mix producer.
 - c. Admixture representative.
 - d. Testing and sampling personnel.
 - e. Engineer who authored Statement of Special Inspection Plan or Engineer's designee.
 - 2. Schedule and conduct prior to incorporation of respective products into Project. Notify Engineer of location and time.
 - 3. Agenda shall include:
 - a. Admixture types, dosage, performance, and redosing at Site.
 - b. Mix designs, test of mixes, and Submittals.
 - c. Placement methods, techniques, equipment, consolidation, and form pressures.
 - d. Slump and placement time to maintain slump.
 - e. Finish, curing, and water retention.
 - f. Thermal control plan.
 - g. Protection procedures for weather conditions.
 - h. Other specified requirements requiring coordination.
 - 4. Conference minutes as specified in Section 01 31 19 - Project Meetings.

PART 2 - PRODUCTS

2.1 CONCRETE MATERIALS

- A. Portland Cement: Use Portland cement conforming to the requirements of ASTM C150 Type II for low alkali cement.
- B. General Admixtures: Admixtures, other than air-entraining agents, may be used when the type and amount to be used are approved. Calcium chloride will not be allowed as an admixture.
- C. Air-Entraining Agents: Use air-entraining agents to the requirements of ASTM C260 added to the mixing water.
- D. Water Reducing Agents: Water reducing or water reducing and retarding admixtures may be used to increase workability of the concrete when approved by the Engineer. Use only admixtures produced by a company approved by the Engineer. Use water reducing admixtures conforming to ASTM C494.
- E. High Range Water Reducer: Conforming to ASTM C494, Type F or G. The preferred admixture shall be free of chlorides and alkalines. A second-generation-type high-range water reducer shall be Type G and be batch-plant-added,
- F. Water: Use potable water for mixing concrete.
- G. Coarse Aggregate: Use coarse aggregate that consists of gravel, crushed slag, crushed stone or other approved inert materials, composed of hard, strong and durable particles, free of injurious coatings, and conforming to the requirements of ASTM C33, except as modified herein.
 - 1. Use only aggregates that include deleterious substances not exceeding the following:

	Percent Passing (by weight)
Soft Fragments	0.20
Coal and Lignite	0.30
Clay Lumps	0.30
Other Deleterious Substances	2.00
Minus 200 Material	1.75

- 2. Use coarse aggregate meeting the following gradations when tested in accordance to the requirements of ASTM C136.

Coarse Aggregate Size	Percent Passing (by weight)				
	1"	3/4"	3/8"	No. 4	No. 8
3/4" to No. 4	100	90-100	20-55	1-10	0-5

H. Fine Aggregate: Use aggregate of natural sand or other approved inert materials composed of hard, strong, and durable particles conforming to the requirements of ASTM C33 except as modified herein.

1. Use only aggregates that include deleterious substances not exceeding the following:

	Percent (by weight)
Clay Lumps	0.50
Coal and Lignite	0.30
Other Deleterious Substances	2.00
Minus 200 Material	1.75

2. Moisture content of fine aggregate shall not exceed 8 percent.
3. Use fine aggregate that is uniformly graded from coarse to fine within the following gradation, when tested in accordance to the requirements of ASTM C136.

Sieve Size	Percent Passing (by weight)
3/8"	100
No. 4	95-100
No. 8	80-100
No. 16	50-85
No. 30	25-60
No. 50	10-30
No. 100	2-10

I. Curing Compounds: Use curing compounds that meet the requirements of ASTM C309.

J. Chemical Hardener:

1. Colorless, aqueous solution containing a blend of magnesium fluosilicate and zinc fluosilicate combined with a wetting agent.

2. Not less than 2 pounds fluosilicate per gallon.
 3. Provide materials which do not react with, inhibit, or otherwise interfere with adhesives and bonding of future floor finishes.
 4. Acceptable Products: L&M Chem-Hard by Laticrete; MasterKure HD 300WB by BASF, or approved alternate.
- K. Waterstops and Joint Fillers:
1. Waterstop of Joints: Extruded PVC waterstop, shape and size as shown on the drawings. Thermo bond all joints in PVC waterstops.
 2. Expansive Water Stop: Expansive waterstop shall be a bentonite/butyl rubber based waterstop that expands on exposure to water. It shall be applied in accordance with manufacturer's recommendations.
 3. Joint Filler: Type B: Provide closed cell polyvinyl chloride foam per ASTM D1752 requirements with resiliency recovery of 95 percent if not compressed more than 50 percent of original thickness.
- L. Fly ash shall be Class F conforming to AASHTO M 295 with the additional requirement that the available alkalis in the fly ash shall not exceed 2 percent.
- M. Concrete Sealer: Concrete sealer is intended to be used on concrete slabs to prevent dusting and staining. The products listed are not intended to be used as curing compounds or for sealing the slab against water leakage.
1. Manufacturers: One of the following or equal:
 - a. Euco Diamond Hard by Euclid Chemical
 - b. L&M Seal Hard by Laticrete

2.2 PROPORTIONING

- A. In proportioning materials for mixing, use certified scales. Do not use volume measurement except for water and liquid admixtures.
- B. Proportion the materials to produce concrete having the following properties or limitations:

Property of Mix	5,000 psi Concrete	4,000 psi Concrete	3,000 psi Concrete
Minimum Compressive Strength (at 28 day test) f_c (pounds per square inch)	5,000	4,000	3,000
Minimum Compressive Strength (at 7 day test) (pounds per square inch)	2,800	2,600	1,800

Property of Mix	5,000 psi Concrete	4,000 psi Concrete	3,000 psi Concrete
Maximum Water Cement Ratio (by weight)	0.40	0.44	0.42
Min. Cement Content (94 pound sacks of cement per cubic yard of concrete)	6.5 sacks	6 sacks	5 sacks
Entrained Air Content (percent by volume)	6 ± 1	6.5 ± 1	5 ± 1
Slump Range (inches)	2-4	2-4	2-5

- C. Fly ash may be used to replace a portion of the Portland cement in the concrete mix. The fly ash used shall not exceed 25 percent of the total cement material in the mix. The cement material in the mix includes both Portland cement and fly ash.
- D. The proposed aggregate for the mix shall be tested for expansion and Alkali-Silica Reaction (ASR) in accordance with AASHTO T 303. Where testing indicates aggregates are reactive, the Contractor shall use fly ash, lithium compound admixtures or both to produce a concrete mix that successfully mitigates ASR. Contractor shall provide test results of successful mitigation using ASTM C1567, with results showing a linear expansion at 14 days not exceeding 0.10 percent when tested.

2.3 READY MIX CONCRETE

- A. Ready-mixed concrete shall conform to the provisions in AASHTO M157 regarding batching, mixers and agitators, mixing and delivery, inspection, consistency and air content, and certification of batches.

2.4 GROUT

- A. Where grout is shown for leveling, concrete (at least 3,000 pounds per square inch) shall be used.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify lines, levels, and dimensions before proceeding with Work of this section.
- B. Coordinate placement of embedded items with erection of concrete formwork and placement form accessories.
- C. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent according to bonding agent manufacturer's instructions.

1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.
 2. Use latex bonding agent only for non-load-bearing applications.
- D. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels, and pack with non-shrink grout.

3.2 CONVEYING

- A. Handle concrete from mixer to location of final placing as rapidly as practicable by methods which prevent segregation or loss of ingredients and assure that quality is maintained.
- B. Use only equipment conforming to ASTM C94.
- C. Use only approved pumping equipment that is rated for the lift and the capacity required for placement.
1. Control pneumatic placement to prevent segregation.
 2. Loss of slump in pumping or pneumatic conveying equipment shall not exceed 2 inches.
 3. Do not use aluminum or aluminum alloy pipes.

3.3 PLACING CONCRETE

- A. Notify Engineer not less than 24 hours prior to commencement of placement operations.
- B. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.
- C. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- D. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Engineer. Where approved, record the amount of water added on site and provide with the special inspection reports.
1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- E. Place concrete continuously or in layers of such thickness that no concrete is deposited on concrete which has hardened sufficiently to cause formation of seams or planes of weakness within section.
1. If a section cannot be placed continuously, locate construction joints as indicated, or as approved by the Engineer.

2. If not indicated, locate construction joints not over 20 feet on center.
 3. Place at such a rate that concrete which is being integrated with fresh concrete is still plastic.
 4. Limit size of each placement to allow for strength gain and volume change as a result of shrinkage.
 5. Make lifts not over 24 inches.
 6. Do not deposit concrete which has partially hardened or has been contaminated by foreign materials.
 7. Remove temporary spreaders in forms where concrete placing has reached an elevation rendering their service unnecessary.
 8. Temporary spreaders may remain embedded in the concrete only if made of metal or concrete, and if prior approval has been obtained.
 9. Do not allow concrete to fall over 6 feet.
- F. Deposit concrete as nearly as practicable in its final position to avoid segregation due to rehandling or flowing.
- G. Control placement to prevent segregation.
- H. Pumping of Concrete:
1. Provide standby pump, conveyor system, crane and concrete bucket, or other system onsite during pumping, for adequate redundancy to ensure completion of concrete placement without cold joints in case of primary placing equipment breakdown.
 2. Minimum Pump Hose (Conduit) Diameter: 4 inches.
 3. Replace pumping equipment and hoses (conduits) that are not functioning properly.
- I. Minimum Time between Adjacent Placements:
1. Construction or Control Joints: 7 days unless otherwise specified.
 2. Construction joint between top of footing or slab, and column or wall: As soon as can safely be done without damaging previously cast concrete or interrupting curing thereof, but not less than 24 hours.
 3. Expansion or Contraction Joints: 1 day.
 4. For columns and walls with a height in excess of 10 feet, wait at least 2 hours before depositing concrete in beams, girders, or slabs supported thereon.

5. For columns and walls 10 feet in height or less, wait at least 1 hour prior to depositing concrete in beams, girders, brackets, column capitals, or slabs supported thereon.

J. Hot Weather:

1. Prepare ingredients, mix, place, cure, and protect in accordance with ACI 301, ACI 305.1, and as follows:
 - a. Maintain concrete temperature below 90 degrees Fahrenheit at time of placement, or furnish test data or other proof that admixtures and mix ingredients do not produce flash set plastic shrinkage, or cracking as a result of heat of hydration. Cool ingredients before mixing to maintain fresh concrete temperatures as specified or less.
 - b. Provide for windbreaks, shading, fog spraying, sprinkling, ice, wet cover, or other means as necessary to maintain concrete at or below specified temperature.

K. Cold Weather Placement:

1. Unless otherwise permitted, shall be in accordance with requirements of ACI 306.1 and as follows:
 - a. Cold weather requirements shall apply when ambient temperature is below 40 degrees Fahrenheit or approaching 40 degrees Fahrenheit and falling.
 - b. Do not place concrete over frozen earth or against surfaces with frost or ice present. Frozen earth shall be thawed to acceptance of Engineer.
 - c. Unless otherwise permitted, do not place concrete in contact with surfaces less than 35 degrees Fahrenheit; requirement is applicable to all surfaces including reinforcement and other embedded items.
 - d. Provide supplemental external heat as needed when other means of thermal protection are unable to maintain minimum surface temperature of concrete as specified in ACI 306.1.
 - e. Maintain minimum surface temperature of concrete as specified in ACI 306.1 for no less than 3 days during cold weather conditions.
 - 1) Protect concrete from freezing until end of curing period and until concrete has attained a compressive strength of 3,500 pounds per square inch or design compressive strength if less than 3,500 pounds per square inch.
2. Provide maximum and minimum temperature sensors placed on concrete surfaces spaced throughout Work to allow monitoring of concrete surface temperatures representative of Work. Unless otherwise permitted, record surface temperature of concrete at least once every 12 hours during specified curing period.

3.4 CONSOLIDATION

- A. Consolidate by vibration so that concrete is thoroughly worked around reinforcement, embedded items, and into corners of forms to eliminate air or stone pockets.
- B. Use internal vibrators with minimum frequency of 8,000 vibrations per minute. Do not use “jitterbugs” or similar devices.
- C. Do not use vibrators to transport concrete.
- D. Insert vibrators approximately 18 inches apart. Leave in long enough to consolidate concrete without segregation; generally, from 5 to 15 seconds maximum. Insert vibrator through new lift into previous lift to ensure good bond between lifts.
- E. Keep spare vibrator available during concrete operations.
- F. Vibrate concrete in vicinity of joints to obtain impervious concrete.
- G. Where concrete is to have an as-cast or smooth-rubbed finish, bring a full surface of mortar against form by vibration process, supplemented if necessary, by spading, to work coarse aggregate back from formed surface.

3.5 BLOCKOUTS FOR PIPE AND CONDUIT

- A. Where pipe or conduit passes into or through concrete walls, floors, or roof slabs, the Contractor may, to facilitate proper alignment, leave holes through the concrete and pour the concrete opening after the pipe or conduit is in place. The size of such openings shall be 2 inches larger than the outside diameter of the bell, flange, or coupling, and shall conform to the special details for pipe openings shown on the plans. When the piping or conduit is entirely placed and securely anchored, the concrete openings through the walls will be poured in accordance with the requirements for bonding new concrete to old as set forth herein. Concrete used to pour these openings shall consist of 1 part cement, 1 part fine aggregate, 1 part non-shrinking aggregate, and 1-1/2 parts coarse aggregate of maximum size of 1/2 inch when the concrete is part of a basin which must hold liquids. Otherwise, the non-shrinking aggregate in these proportions shall be replaced by fine aggregate. Concrete poured in these openings shall be thoroughly vibrated or rodded to insure a watertight joint between the new and old concrete and the new concrete and the pipe or conduit. The form for the closure shall be constructed with a pouring funnel. A plug of concrete shall be left in the pouring funnel. After the concrete has taken its initial set, the plug shall be removed and the exposed, broken face ground smooth. Pouring of blockout holes shall be done from the pressure side whenever possible. Such joints shall be thoroughly cured by keeping them constantly wet for not less than 7 days.
- B. Where approved by the Engineer, blockout holes may be dry packed using non-shrink grout for basins which must hold liquid, and normal grout in other places. Only sufficient water shall be added to make a dry, crumbling mass. When the mixture is pressed tightly together into a ball with the hands, there should not be sufficient water in the mixture to stain the hands, and when such a ball is broken, it should crumble. This mixture shall be tamped or rodded solidly into the space, preferably from the pressure side. A backing board or stop

shall be provided at the back side of this space against which the mixture can be tamped.
Curing shall be specified as above.

3.6 PATCHING

- A. Repair surface defects immediately after form removal. Coat all repaired areas with grey Sikagard 62.
- B. Fill and finish tie holds with non-shrink grout and coat with grey Sikagard 62.
- C. Repair defective areas.
 - 1. Use of plaster coat embeco or calcium chloride is prohibited.
 - 2. Remove honeycomb and defective concrete down to sound concrete.
 - 3. Make edges perpendicular to surface or slightly undercut.
 - 4. Feathered edges are not permitted.
 - 5. Dampen area to be patched and at least 6 inches surrounding it to prevent absorption of patching mortar water.
 - 6. Prepare bonding grout of approximately 1 part cement to 1 part fine sand passing a No. 30 sieve.
- D. Make patching mixture of same materials and of approximately same proportions as used for concrete, except omit coarse aggregate.
 - 1. Mortar: 1 part cement to 2 parts sand by damp loose volume.
 - 2. Mix white and gray Portland cement as required to match surrounding concrete.
 - 3. Keep mixing water to a minimum.
 - 4. Mix patching mortar in advance and allow to stand with frequent manipulation, without addition of water, until it has reached stiffest placeable consistency.
- E. After surface water has evaporated from patch area, brush bond coat into surface.
 - 1. When bond coat begins to lose water sheen, apply patching mortar.
 - 2. Thoroughly consolidate mortar into place and strike-off so as to leave patch slightly higher than surrounding surface.
 - 3. Leave undisturbed for at least 1 hour before final finish.
 - 4. Keep patched area damp for 7 days.
 - 5. Do not use metal tools in finishing an exposed patch.

- F. Repair of concrete shall provide structurally sound surface finish, uniform in appearance or upgrade finish by other means until acceptable by Engineer.
- G. Tie Holes: After being cleaned and thoroughly dampened, fill tie holes solid with non-shrink grout and coat with Sikagard 62. Round tie holes less than 1/4 inch diameter by 1-1/2 inch deep in rough form finished surfaces need not be filled.
- H. Remove metal objects not intended to be exposed in as-built condition of structure including wire, nails, and bolts, by chipping back concrete to a depth of 1 inch and then cutting or removing metal object. Repair chipped out concrete as specified for defective areas.

3.7 FORMED CONCRETE FINISH

- A. Rough Finish: Patch defects, chip or rub off fins exceeding 1/4-inch in height.
- B. Smooth Finish: Patch tie holes and defects and remove fins completely. When surface texture is impaired and form joints misaligned by more than 1/8-inch, grind or bushhammer. Slurry grout areas evidencing minor mortar leakage to match adjacent concrete.
- C. Rubbed Finish: Remove forms and perform necessary patching as soon after placement as possible. Finish newly hardened concrete no later than day following form removal. Wet surfaces and rub with carborundum brick or other abrasive until uniform color and texture are produced. No cement grout to be used other than cement paste drawn from concrete by rubbing process.
- D. Sacked Finish: Mix one-part Portland cement and 1-1/2 parts fine sand with sufficient water to produce grout having consistency of thick paint or use commercial premixed sacking grout. Wet surface of concrete sufficiently to prevent absorption of water from grout. Apply grout uniformly. Immediately after grouting, scrub surface vigorously with cork float or stone to coat surface and fill voids. While grout is still plastic, remove excess grout by working surface with rubber float or sack. After surface whitens from drying, rub vigorously with clean burlap. Keep damp for at least 36 hours after final rubbing.
- E. Formed Concrete Finish Schedule. The finish required for formed concrete is shown on the drawings. Where finishes of formed concrete are not shown, provide rough finish for concrete not exposed to view and rubbed finish for concrete exposed to view

3.8 CURING AND PROTECTION

- A. To preserve moisture in unformed concrete surfaces, apply one of the following immediately after placement and finishing.
 - 1. Continuous mist spray.
 - 2. Waterproof sheet materials, ASTM C171.
 - 3. Curing compound, ASTM C309. Apply in accordance with recommendations of manufacturer immediately after water sheen has disappeared. Do not use on any

surface against which additional concrete or other material is to be bonded or adhesively applied, unless it is proven that curing compound will not prevent bond, or unless positive measures are taken to remove it completely from areas to receive bonded applications. Provide curing compound compatible with hardener in areas where hardener is to be used.

- B. Continue curing concrete for 7 days.
- C. When mean daily outdoor temperature is less than 40 degrees Fahrenheit, maintain temperature of concrete between 50 degrees Fahrenheit and 70 degrees Fahrenheit for concrete placement.

3.9 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by the Engineer. Remove and replace concrete that cannot be repaired and patched to Engineer's approval.
- B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part Portland Cement to two and one half parts fine aggregate passing No 16 sieve, using only enough water for handling and placing.
- C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
 - 1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2-inch in any dimension in solid concrete, but not less than 1-inch in depth. Make edge of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
 - 2. Patch a test area at an inconspicuous location to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
 - 3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by the Engineer.
- D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
 - 1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.1-inches wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
 - 2. After concrete has cured at least 14 days, correct high areas by grinding.

3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
4. Repair materials and installation not specified above may be used, subject to Engineer's approval.

3.10 FIELD QUALITY CONTROL

- A. The Contractor shall obtain and pay for services of certified testing laboratory to perform sampling and testing of installed materials to assure that the requirements of this specification are met. Testing and analysis of concrete shall be performed under provisions of Section 01 45 00 – Quality Control.
- B. Provide adequate facilities for safe storages and proper curing of concrete test specimens onsite for first 24 hours, and for additional time as may be required before transporting to test lab.
- C. Unless otherwise specified, sample concrete for testing for making test specimens, from point of delivery.
- D. When concrete is pumped, sample and test air content at point of delivery and at point of placement.
- E. The frequency herein specified for each field control test is approximate. A greater or lesser number of tests may be made, as required by the Engineer, to verify compliance with these specifications.
- F. Submit proposed mix design of each class of concrete to Engineer for review prior to commencement of Work.
- G. Each 100 tons of fine aggregate and each 200 tons of coarse aggregate shall be sampled and tested in accordance with ASTM D75 and C136.
- H. Entrained air: Test every load of concrete delivered to the project. Air content shall be determined in accordance with ASTM C231.
- I. Slump: Test every load of concrete delivered to the project.
- J. Pumped Concrete: Take concrete samples for slump, ASTM C143 and test specimens ASTM C31.
- K. Strength characteristics: 1 set of 4 concrete test cylinders shall be made for every 40 cubic yards or less of each class of concrete placed each day. 1 additional set shall be taken from each additional 40 cubic yards, or major fraction thereof, placed in any 1 day. 1 cylinder of each set shall be tested at an age of 7 days and 2 cylinders shall be tested at an age of 28 days. The fourth cylinder of the sets shall be tested only if deemed necessary by the Engineer. Test results shall be evaluated in accordance with ACI 214 and 318.

- L. 3 additional test cylinders will be taken during cold weather and shall be cured on site under the same conditions as the concrete it represents. 1 cylinder shall be tested at an age of 7 days and the other cylinder at an age of 28 days.

3.11 DEFECTIVE CONCRETE

- A. Test Results: The testing agency shall report test results in writing to Engineer 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 Engineer. The cost of additional testing shall be borne by the Contractor when defective concrete is identified.
- D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area.

END OF SECTION 03 30 00

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections apply to all of Division 26 Specifications. This Specification section applies to all Division 26 Specifications and Electrical Drawings.
- B. Contractor shall review all other Division 26 specifications and drawings for additional requirements.

1.02 QUALITY ASSURANCE

- A. Comply with latest NEC, NFPA, UBC, UFC, UL and applicable Local and State Codes. Also comply with Utility Company regulations and industry standards and these Drawings.
- B. Work shall be done by only trained, licensed and experienced workmen familiar with the requirements.
- C. All microprocessor based equipment and software with equipment shall utilize 4 digits for the year part of all dates. A two digit date shall be an option for printing at Owner's preference.

1.03 EXTENT OF DRAWINGS / SPECIFICATION

- A. Drawings indicate intent and general layout of electrical systems for the Project. Drawings are partly diagrammatic and do not indicate all fittings and accessories which may be required. Provide such fittings and accessories as required to form a complete and operating system in general conformance with Specifications and Drawings.

1.04 PRIOR APPROVALS

- A. Unless directed otherwise by Division 1, all products submitted for prior approval shall be received by the Engineer 10 business days prior to Bid. Supply technical data, photometrics and dimensional Drawings showing that substitutes are equal to product specified. Faxed prior approvals will not be accepted.

1.05 DISCREPANCIES

- A. Prior to submitting Bid, Contractor shall refer any apparent discrepancies or omissions to Engineer for clarification. The more stringent provisions shall take precedence where codes, Specifications and Drawings differ with one another. The Contractor shall Bid the more expensive requirement, unless discrepancy is addressed by Addendum prior to Bid.

1.06 SHOP DRAWINGS AND SUBMITTALS

- A. Brochures and shop drawings shall include but not be limited to information on the following materials:
 - 1. Primary & Secondary Service Equipment and feeders, Motor Control Equipment, Fire Alarm system, Access Control Riser system, A/V Riser system, Distribution Panels, Lighting Controls, Security and Switchboards
 - 2. Raceways and Fittings, Panel boards
 - 3. Emergency Power Riser System
 - 4. Motor Control Centers
 - 5. Wiring Devices, Lighting Fixtures, and Controls
 - 6. Signal and Communications Systems
 - 7. Transformers
 - 8. Security system
 - 9. Electric Snow & Ice Melt System
- B. One copy of approved Motor Control Equipment submittal shall be furnished to the Temperature Control Contractor for purpose of coordination along with any equipment that may be tied to the WSU Building Automation System.

1.07 REQUIREMENTS FOR ELECTRICAL OPERATIONS & MAINTENANCE (O&M) MANUALS

- A. Scope: See the General Provisions for Operations and Maintenance manual requirements.
- B. Systems and Equipment
 - 1. The O&M manuals shall include the following information of all electrical systems and equipment supplied.
 - i. Lighting Fixtures
 - 2.1) Exterior
 - 2.2) Controllers
 - 2. As-built and redline drawings.

- C. Information Contained in the O&M manuals: Information contained in the manual shall consist of catalog data on each item, testing and startup logs for all equipment, warranty information, maintenance information, a complete parts list, recommended supply source(s) for repair parts, descriptions of system operation, shop drawings, and wiring and riser diagrams.

PART 2 - PRODUCTS

2.01 SUPPORTING DEVICES

- A. Channel and angle support systems, hangers, anchors, sleeves, brackets, fabricated items, and fasteners are designed to provide secure support from the building structure for electrical components.
 - 1. Material: Steel, except as otherwise indicated, protected from corrosion with zinc coating or with treatment of equivalent corrosion resistance using approved alternative finish or inherent material characteristics.
 - 2. Metal Items for Use Outdoors or in Damp Locations: Hot-dip galvanized steel, except as otherwise indicated.
- B. Steel channel supports have 9/16-inch diameter holes at a maximum of 8 inches o.c., in at least 1 surface.
 - 1. Fittings and accessories mate and match with channels and are from the same manufacturer.
 - i Raceway and Cable Supports: Manufactured clevis hangers, riser clamps, straps, threaded C-clamps with retainers, ceiling trapeze hangers, wall brackets, and spring steel clamps or "click"- type hangers.

2.02 CONCRETE EQUIPMENT BASES

- A. Forms and Reinforcing Materials: As specified in Section 03 30 00 – Cast-In-Place Concrete.
- B. Concrete: 3000 psi, 28-day compressive strength as specified in Section 03 33 00 – Cast-In-Place Concrete.

1.06 RACEWAY AND CABLE LABELS

- A. Comply with ANSI A13.1, Table 3, for minimum size of letters for legend and for minimum length of color field for each raceway and cable size.
 - 1. Color: Black letters on orange field.
 - 2. Legend: Indicates voltage.

- i Adhesive Labels: Preprinted, flexible, self-adhesive vinyl with legend overlaminated with a clear, weather- and chemical-resistant coating.
- B. Pretensioned, Wraparound Plastic Sleeves: Flexible, preprinted, color-coded, acrylic band sized to suit the diameter of the line it identifies and arranged to stay in place by pretensioned gripping action when placed in position.
- C. Colored Adhesive Tape: Self-adhesive vinyl tape not less than 3 mils thick by 1 to 2 inches wide.
- D. Underground-Line Warning Tape: Permanent, bright-colored, continuous-printed, vinyl tape.
 - 1. Not less than 6 inches wide by 4 mils thick.
 - 2. Compounded for permanent direct-burial service.
 - 3. Embedded continuous metallic strip or core.
 - 4. Printed legend indicating type of underground line.
- E. Tape Markers: Vinyl or vinyl-cloth, self-adhesive, wraparound type with preprinted numbers and letters.

2.03 MISCELLANEOUS IDENTIFICATION PRODUCTS

- A. Cable Ties: Fungus-inert, self-extinguishing, one-piece, self-locking, Type 6/6 nylon cable ties.
 - 1. Minimum Width: 3/16-inch.
 - 2. Tensile Strength: 50 lb minimum.
 - 3. Temperature Range: Minus 40 to plus 185 deg F.
 - 4. Color: According to color-coding.

PART 3 - PRODUCTS

3.01 EQUIPMENT INSTALLATION REQUIREMENTS

- A. Install components and equipment to provide the maximum possible headroom where mounting heights or other location criteria are not indicated.
- B. Install items level, plumb, and parallel and perpendicular to other building systems and components, except where otherwise indicated.

- C. Install equipment to facilitate service, maintenance, and repair or replacement of components. Connect for ease of disconnecting, with minimum interference with other installations.
- D. Give right of way to raceways and piping systems installed at a required slope.

3.02 ELECTRICAL SUPPORTING METHODS

- A. Damp Locations and Outdoors: Hot-dip galvanized materials, U-channel system components.
- B. Dry Locations: Steel materials.
- C. Support Clamps for PVC Raceways: Click-type clamp system.
- D. Conform to manufacturer's recommendations for selecting supports.
- E. Strength of Supports: Adequate to carry all present and future loads, times a safety factor of at least 4; 200 lb minimum design load.

3.03 GENERAL INSTALLATION OF MATERIALS

- A. Install wires according to manufacturer's written instructions and NECA's "Standard of Installation."
- B. Conductor Splices: Keep to the minimum and comply with the following:
 - 1. Install splices and taps that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
 - 2. Use splice and tap connectors that are compatible with conductor material.
 - i. Install devices to securely and permanently fasten and support electrical components.
 - ii. Raceway Supports: Comply with NFPA 70 and the following requirements:
 - 1) Conform to manufacturer's recommendations for selecting and installing supports.
 - 2) Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U bolts, clamps, attachments, and other hardware necessary for hanger assembly and for securing hanger rods and conduits.
 - 3) Support parallel runs of horizontal raceways together on trapeze- or bracket-type hangers.

- 4) Spare Capacity: Size supports for multiple conduits so capacity can be increased by a 25 percent minimum in the future.
 - 5) Support individual horizontal raceways with separate, malleable iron pipe hangers or clamps.
 - 6) Hanger Rods: 1/4-inch diameter or larger threaded steel, except as otherwise indicated.
 - 7) Spring Steel Fasteners: Specifically designed for supporting single conduits or tubing. May be used in lieu of malleable iron hangers for 1-1/2-inch and smaller raceways serving lighting and receptacle branch circuits above suspended ceilings and for fastening raceways to channel and slotted angle supports in accordance with NEC.
 - 8) In vertical runs, arrange support so the load produced by the weight of the raceway and the enclosed conductors is carried entirely by the conduit supports, with no weight load on raceway terminals.
- C. Miscellaneous Supports: Install metal channel racks for mounting cabinets, panelboards, disconnects, control enclosures, pull boxes, junction boxes, transformers, and other devices except where components are mounted directly to structural features of adequate strength.
- D. Sleeves: Install for cable and raceway penetrations of concrete slabs and walls, except where core-drilled holes are used. Install for cable and raceway penetrations of masonry and fire-rated gypsum walls and of all other fire-rated floor and wall assemblies. Install sleeves during erection of concrete and masonry walls.
- E. Fastening: Unless otherwise indicated, securely fasten electrical items and their supporting hardware to the building structure. Perform fastening according to the following:
1. Fasten by means of wood screws or screw-type nails on wood; toggle bolts on hollow masonry units; concrete inserts or expansion bolts on concrete or solid masonry; and by machine screws, welded threaded studs, or spring-tension clamps on steel.
 2. Select fasteners so the load applied to any fastener does not exceed 25 percent of the proof-test load.
- F. Install concrete pads and bases where indicated.

3.04 LABEL INSTALLATION

- A. Identification Materials and Devices: Install at locations for most convenient viewing without interference with operation and maintenance of equipment.
- B. Lettering, Colors, and Graphics: Coordinate names, abbreviations, colors, and other designations with corresponding designations in the Contract Documents or with those required by codes and standards. Use consistent designations throughout Project.
- C. Sequence of Work: If identification is applied to surfaces that require finish, install identification after completing finish work.
- D. Paths of Underground Electrical Lines: During trench backfilling, for exterior underground power, control, signal, and communication lines, install continuous underground plastic line marker located directly above line at 6 to 8 inches below finished grade. Where width of multiple lines installed in a common trench or concrete envelope does not exceed 16 inches overall, use a single line marker. Install line marker for underground wiring, both direct-buried cables and cables in raceway.
- E. Color-Coding of Secondary Phase Conductors: Use the following colors for service, feeder and branch-circuit phase conductors:
 - 1. 480/277-V Conductors:
 - i Phase A: Brown.
 - ii Phase B: Orange.
 - iii Phase C: Yellow.
 - iv Neutral: Gray.
 - v Ground: Green.
 - 2. Factory apply color the entire length of conductors, except the following field-applied, color-coding methods may be used instead of factory-coded wire for sizes larger than No. 10 AWG:
 - i Colored, pressure-sensitive plastic tape in half-lapped turns for a distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Use 1 inch wide tape in colors specified. Adjust tape bands to avoid obscuring cable identification markings.

- F. For panelboards, provide framed type circuit schedules with identification of items controlled by each breaker. Indicate room numbers of items controlled or room name where appropriate for Owners convenience. Final schedules shall be typed or printed for clarity. Hand written schedules are not acceptable. Schedules shall be posted inside each panel door mounted in transparent card holder upon project completion.

END OF SECTION 26 00 00

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes wires, cables and connectors for power, lighting, signal, control and related systems rated 600 V and less.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Acceptable Manufacturers:
 - 1. General Cable
 - 2. South Wire
 - 3. American
 - 4. Serro
- B. Branch Circuit Wire and Cable – single conductors in raceway:
 - 1. #12 AWG is the minimum conductor size, solid or stranded.
- C. Control Circuit Conductors:
 - 1. #14 AWG conductors are permitted for control circuits, solid or stranded.
- D. Splices and Terminations:
 - 1. Splices:
 - i. Solderless type only.
 - ii. Preinsulated "twist-on" type permitted on conductor size number 10 and smaller.
 - iii. Hydraulic compression long barrel type with application preformed insulated cover, heat shrinkable tubing or plastic insulated tape for all stranded conductors.
 - 2. Terminations:
 - i. 250 kcmil and above - two hole long barrel compression lugs or equivalent.

- ii. Below 250 kcmil - single hole compression lug or equivalent.
 - iii. Conductors #12 and smaller: provide eye or forked tongue compression lugs at bolted or screw connections - no lugs required for compression style terminal blocks.
 - 3. Control Cable Splices and Terminations:
 - i. Splices: Pre-insulated crimp pigtail or butt splice connectors.
 - ii. Terminations: Locking spade, insulated, compression lugs.
- E. Service Laterals and Feeders:
 - 1. At a minimum, conductors shall be stranded copper; 98% conductivity, THWN-XHHW single conductors in raceway.
- F. General Requirements, Copper Conductors:
 - 1. Insulation shall be:
 - i. Wire insulation for wet installation shall be: Type XHHW-2, temperature rating 90° C and marked "SUN RES".
 - 2. Mechanical compression type or mechanical screw type connectors, dual rated.
 - 3. Connectors shall be dual rated (AL7CU or AL9CU) and listed under current, adopted UL 486A for compression termination and current, adopted UL 486B for mechanical set-screw termination for use with aluminum and copper conductors and sized to accept aluminum conductors of the ampacity specified.
 - 4. Approved manufacturers for mechanical compression type connectors:
 - i. Homac
 - ii. Ilsco
 - iii. Burndy
 - iv. Thomas and Betts

PART 3 - EXECUTION

3.01 GENERAL INSTALLATION

A. Installation:

1. No more than 7 conductors within a homerun or branch circuit raceway, Three Phases, 3 Neutrals, and 1 insulated equipment-grounding conductor. No shared neutrals shall be permitted

3.02 600 VOLT CABLE AND TERMINATIONS

- A. Unterminated wiring shall be removed unless specifically approved to remain by the WSU Construction Manager.

END OF SECTION 26 05 19

PART 1 - GENERAL

1.01 GENERAL:

- A. No raceways smaller than 3/4" shall be used.
- B. All power cable and systems cable shall be in approved raceway.
- C. Non-metallic sheathed cable is not permitted.
- D. Outside branch circuit buried raceway shall be no smaller than 1-inch in size.
- E. The use of raceways as an equipment grounding path shall not be permitted.
- F. Couplings and fittings to be set screw or compression for metallic conduit.
- G. The use of EMT in concrete slabs shall not be permitted.
- H. The use of flexible metal conduit and liquid tight flexible metal conduit shall be kept to a minimum, (examples: for final connections to vibrating machinery; light fixture whips, etc.), and shall not exceed 6-feet in length. Use liquid tight conduit where prone to excessive moisture or wash down.
- I. Rigid non-metallic conduit (PVC) is permitted for underground installations. Schedule 40 shall be used for light duty and schedule 80 shall be used for heavy duty. Do not use PVC elbows. Type EB is permitted for underground rebar reinforced concrete duct banks.
- J. Conduits installed under slab-on-grade shall be buried a minimum of 12" below the bottom of the slab and clearly identified by elevation in Record Drawings.
- K. Use RMC or IMC where exposed to physical damage or where exposed to weather. Concrete stub-outs/stub-ups to be RMC or IMC, with the curved portion of the elbow completely encased in concrete.
- L. For underground conduit entering a building into top-fed equipment, install a junction box with drainhole to allow moisture to drain and prevent moisture from entering top-fed equipment.
- M. Branch circuit raceway shall not have more than seven (7) conductors within a raceway: three (3) ungrounded conductors, three (3) grounded, and one (1) equipment grounding conductor.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

- A. Republic Conduit

- B. Allied Tube & Conduit
- C. Carlon

2.02 NONMETALLIC CONDUIT AND DUCTS

- A. Rigid Nonmetallic Conduit (RNC): NEMA TC 2 and UL 651, Schedule 80 PVC.
- B. PVC Conduit and Tubing Fittings: NEMA TC 3; match to conduit or conduit/tubing type and material.
- C. Liquidtight Flexible Nonmetallic Conduit and Fittings: UL 1660. Fittings shall be specifically approved for use with this raceway.
- D. Conduit, Tubing, and Duct Accessories: Types, sizes, and materials complying with manufacturer's published product information. Mate and match accessories with raceway.

2.03 CONDUIT BODIES

- A. General: Types, shapes, and sizes as required to suit individual applications and NEC requirements.
- B. Provide matching gasketed covers secured with corrosion-resistant screws.
- C. Metallic Conduit and Tubing: Use metallic conduit bodies. Use bodies with threaded hubs for threaded raceways.

PART 3 - EXECUTION

3.01 UNDERGROUND CONDUIT TESTING

- A. Pressure Test: Prior to pulling electrical cable through underground conduits, Contractor shall pressure test underground conduit entering a building to verify quality of installation and that conduit was not damaged during subsequent construction. Air pressure test at 25 psi for at least 60 seconds to verify that conduits remain intact. Air pressure test shall be observed and approved by the WSU Construction Manager.
- B. Prior to pulling electrical cable through underground conduits, Contractor shall pull a properly-sized swab and mandrel through main building service / secondary feeder conduits to clean and verify that conduit is intact.

END OF SECTION 26 05 33

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes overcurrent protective devices (OCPDs) rated 600 V and below and switching devices commonly used with them.

1.02 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 specification sections.
- B. Product data for fuses, fusible switches, circuit breakers, and OCPD accessories specified in this Section, including descriptive data.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
 - 1. Cartridge Fuses:
 - i. Bussmann Div., Cooper Industries, Inc.
 - ii. Gould Inc.
 - iii. Littelfuse Inc.
 - 2. Molded-Case Circuit Breakers:
 - i. Square D Co.

2.02 OVERCURRENT PROTECTIVE DEVICES (OCPD'S), GENERAL

- A. General: Provide OCPD's in indicated types, as integral components of panelboards, switchboards, and also as individually enclosed and mounted single units.
- B. Enclosures: NEMA 250 "Enclosures for Electrical Equipment (1,000 Volts Maximum)."

2.03 CARTRIDGE FUSES

- A. General: NEMA Standard FU1, "Low-Voltage Cartridge Fuses." Unless indicated otherwise, provide nonrenewable cartridge fuses of indicated types, classes, and current ratings that have voltage ratings consistent with the circuits on which used.

- B. Class RK1 and RK5 Dual Element Time-Delay Fuses: UL 198E, "Class R Fuses."

2.04 FUSIBLE SWITCHES

- A. General: UL 98 "Enclosed and Dead Front Switches" and NEMA KS 1 "Enclosed Switches," quick-make, quick-break heavy-duty units.
- B. Rating: Load-breaking capacity in excess of the normal horsepower rating for the switch.
- C. Withstand Capability: In excess of the let-through current permitted by its fuse when subject to faults up to 100,000 RMS symmetrical amperes.
- D. Operation: By means of external handle.
- E. Interlock: Prevents access to switch interior except when in "off" position.
- F. Fuse Clips: Rejection type.
- G. Padlocking Provisions: For 2 padlocks, whether open or closed.
- H. Enclosure for Independent Mounting: NEMA Type 1 enclosure except as otherwise indicated or required to suit environment where located.

2.05 MOLDED-CASE CIRCUIT BREAKERS

- A. General: UL 489, "Molded Case Circuit Breakers and Circuit Breaker Enclosures," and NEMA AB 1, "Molded Case Circuit Breakers."
- B. Construction: Bolt-in type, except breakers 225-ampere frame size and larger may be plug-in type if held in place by positive locking device requiring mechanical release for removal.
- C. Characteristics: Indicated frame size, trip rating, number of poles, and a short-circuit interrupting capacity rating of 18,000 amperes symmetrical, unless a greater rating as indicated.
- D. Tripping Device: Quick-make, quick-break toggle mechanism with inverse-time delay and instantaneous overcurrent trip protection for each pole.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. OCPD's in distribution equipment shall be installed to manufacturers standards of installation.

3.02 CONNECTIONS

- A. Check connectors, terminals, bus joints, and mountings for tightness. Tighten field-connected connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL 486A and UL 486B.

3.03 GROUNDING

- A. Provide equipment grounding connections for individually mounted OCPD units as indicated and as required by NEC. Tighten connectors to comply with tightening torques specified in UL Standard 486A to assure permanent and effective grounding.

3.04 FIELD QUALITY CONTROL

- A. Visual and mechanical inspection: Include the following inspections and related work.
 - 1. Overcurrent-Protective-Device Ratings and Settings: Verify indicated ratings and settings to be appropriate for final system arrangement and parameters. Where discrepancies are found, test organization shall recommend final protective device ratings and settings. Use accepted revised ratings or settings to make the final system adjustments.
 - 2. Inspect for defects and physical damage, NRTL labeling, and nameplate compliance.
 - 3. Exercise and perform operational tests of all mechanical components and other operable devices in accordance with manufacturer's instruction manual.
 - 4. Check tightness of electrical connections of OCPD's with calibrated torque wrench. Refer to manufacturer's instructions for proper torque values.

5. Clean OCPD's using manufacturer's approved methods and materials.
6. Retest: Correct deficiencies identified by tests and observations and provide retesting of OCPD's. Verify by the system tests that specified requirements are met.

3.05 CLEANING

- A. Upon completion of installation, inspect OCPD's. Remove paint splatters and other spots, dirt, and debris. Touch up scratches and mars of finish to match original finish.

END OF SECTION 26 28 00

PART 1 - GENERAL

1.01 GENERAL

A. LED products shall comply with the following standards:

1. IESNA LM-79
2. IESNA LM-80
3. IESNA TM-21
4. IEC 62717
5. IEC 62722-2-1

PART 2 - PRODUCTS

2.01 CAMPUS STANDARD EXTERIOR LIGHT FIXTURES, BY LOCATION

A. Reference lighting zones illustrated on E 26 56 00 "WSU Pullman Campus Lighting Fixtures Standard Map."

1. Pedestrian Light Fixtures:
 - i. Gardco 17" Form 10 Round Semi-Spherical (MA)

2.02 PEDESTRIAN LIGHT FIXTURE SPECIFICATIONS

A. Fixture: Gardco 17" Form 10 Round Semi-Spherical (MA)

1. Luminaire:
 - i. New: MA17L-32L-900-NW-G2-5-277-DD-FP1-NA
2. Finish:
 - i. Natural Aluminum, Association Architectural Class 1 anodized finish.
 - ii. Electrostatically applied, thermally cured TGIC polyester powdercoat finish or liquid polyurethane.

B. LIGHT POLE

1. Pole:
 - i. New: RA4 HB 10 D1 NP
2. Finish:

- iii. Natural Aluminum, Association Architectural Class 1 anodized finish.
- iv. Electrostatically applied, thermally cured TGIC polyester powdercoat finish or liquid polyurethane.

2.04 EXTERIOR LIGHTING POLE BASES:

- A. See WSU Standard Detail Drawing: E-501
 - 1. All pole bases not subject to vehicular traffic shall be at least 12 inches from top of base to the highest point of finish grade.
 - 2. All pole bases subject to vehicular traffic shall be at least 36 inches from top of base to the highest point of finish grade.
 - 3. Precast concrete pole bases are preferable and recommended on the WSU campus.
 - i. Pre-Approved Manufacturer: Wilbert Precast

PART 3 – PRODUCTS (NOT USED)

END OF SECTION 26 56 00

SECTION 31 00 00 - EARTHWORK

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Provide all labor, materials, and equipment as required for all excavation, grading, providing borrow materials, hauling, placing and compacting earthwork materials to construct the site to the grades shown on the plans.
- B. Prior to commencement of any earthwork, the Contractor shall review the geotechnical reports. The geotechnical report is on file at the office of the Engineer for information only and the Contractor is responsible for making any interpretations there from.
- C. Submit to the Engineer's Field Representative load tickets on all materials delivered to the site.

1.2 REFERENCE STANDARDS

- A. ASTM D 136 Sieve Analysis of Fine and Coarse Aggregates
- B. ASTM D 422 Method for Particle - Size Analysis of Soils
- C. ASTM D 698 Test Methods for Moisture-Density Relations of Soils and Soil-Aggregated Mixtures, Using 5.5-lb Rammer and 12-inch Drop
- D. ASTM D 1556 Density of Soil by the Sand-Cone Method
- E. ASTM D 1557 Test Methods for Moisture-Density Relations of Soils and Soil Aggregate Mixtures, Using 10 lb. Rammer and 10 inch Drop
- F. ASTM D 1633 Test Method for Compressive Strength of Molded Soil-Cement Cylinders
- G. ASTM D 2419 Test Method for Sand Equivalent Value of Soils and Fine Aggregate
- H. ASTM D 2487 Classification of Soils for Engineering Purposes
- I. ASTM D 2901 Test Method for Cement Control of Freshly-Mixed Soil Cement
- J. ASTM D 2922 Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth).
- K. ASTM D 4254 Test Methods for Minimum Index Density of Soils and Calculative of Relative Density
- L. OSHA - 1926.650-651 and other applicable sections.

1.3 SUBMITTALS

- A. The Contractor shall submit test results of all materials proposed to be used in work in accordance with the requirements of Section 01 33 00 - Submittal Procedures.
- B. Submit sieve analysis, moisture density relationship test for both ASTM D698 and D1557, and sand equivalency. The sieve analysis and moisture density relationship tests must have been completed within 12 calendar months from the date of submittal.

1.4 DEFINITIONS

- A. Backfill or Fill: (a) Material used to replace material removed during construction or (b) The act of replacing or placing material during construction.
- B. Backfill Operation or Fill Operation: The method and the activity required to fill surface depressions and excavations, or to construct fills to required grades.
- C. Common Fill: Fill or borrow materials which are naturally occurring and not meeting a specific gradation or classification.
- D. Structural Fill: The act of placing common or imported fill material under controlled operation to a certain density.

PART 2 - PRODUCTS

2.1 SUITABLE FILL AND BACKFILL MATERIAL REQUIREMENTS

- A. The following types of suitable materials are defined (see Execution for the location where the materials are approved for use or where identified in other specifications and drawings):
 - 1. Common Fill: Fill or borrow materials which are naturally occurring, not meeting a specific gradation or classification, are not Unsuitable Materials, and can be placed in a controlled operation to a certain density.
 - 2. Sand Backfill (Bedding Sand): Sand with 100 percent passing a 3/8-inch sieve, at least 90 percent passing a Number 4 sieve and less than 3% passing the No. 200 sieve.
 - 3. Crushed Stone Backfill (Bedding Chips): Manufactured angular, crushed stone, crushed rock, or crushed slag with the following gradation requirements:

Sieve Size	Percent Passing By Weight
1"	100
3/4"	80 - 100
3/8"	20 - 70
No. 4	5 - 20

Sieve Size	Percent Passing By Weight
No. 200	0 - 3

4. Foundation Stabilization Backfill: Uncrushed gravel, and sand with the gradation requirements below. The material shall have a minimum sand equivalent value of 28, sand equivalent not required if less than 5% passing the No. 200 sieve.

Sieve Size	Percent Passing By Weight
3"	100
No. 4	25 - 60
No. 200	0 - 12

5. Coarse Gravel (Drain Rock): Crushed rock or gravel which is free of shale, clay, friable materials, and or debris that conforms to the gradation below. Drain Rock shall have a minimum of 35% Air Voids as determined by ASTM C 29 Standard Test Method for Unit Weight and Voids in aggregate, Jigging Procedure.

Sieve Size	Percent Passing By Weight
3"	100
1"	25 - 60
3/8"	0 - 4
200	0 - 2

6. Aggregate Base (3/4" Road Mix): Crushed aggregate base material of such nature that it can be compacted readily by watering and rolling to form a firm, stable base. The material shall meet the following gradation requirements:

Sieve Size	Percent Passing By Weight
1"	100
3/4"	90 - 100
No. 4	40 - 65
No. 8	30 - 50
No. 200	3 - 9

- a. The sand equivalent value shall be not less than 30, sand equivalent not required if less than 5% passing the No. 200 sieve

b. The material shall have a Los Angeles Abrasion of 35% or less.

7. Aggregate Subbase (Pit Run): Uncrushed rock aggregate subbase material that can be compacted readily by watering and rolling to form a firm stable subbase. The material shall meet the following requirements:

Sieve Size	Percent Passing By Weight
4"	100
3"	90-100
No. 4	30-75
No. 200	0 – 15.0

a. The sand equivalent value shall be not less than 30, sand equivalent not required if less than 5% passing the No. 200 sieve.

b. The material shall have a Los Angeles Abrasion of 40% or less.

8. Imported Trench Backfill (8" Pit Run): Uncrushed rock aggregate material that can be compacted readily by watering and rolling to form a firm stable trench. The sand equivalent value shall be not less than 25, sand equivalent not required if less than 5% passing the No. 200 sieve, and the material shall meet the following requirements:

Sieve Size	Percent Passing By Weight
8"	100
No. 4	15 - 60
No. 200	0 - 12

9. Granular Borrow: Provide sand, sand and gravel, or sand and rock mixtures with a sand equivalent greater than 30. Sand equivalent is not required if the material has less than 5 percent passing the No. 200 sieve.
10. Trench Plug Material: Low permeable fill material, a non-dispersible clay material having a minimum plasticity index of 10.
11. Top Soil: Excavated material, up to 18 inches below stripped surface, free of rocks larger than 3 inches, organics, roots, refuse, brush or other debris.

12. Rip Rap: Riprap material shall be hard, durable, angular in shape and free from overburden and organic material. The breadth or thickness of any stone shall not be less than one-third of its length. The minimum unit weight of the stone shall be 165 pounds per cubic foot. Riprap material shall have less than 10 percent loss after five cycles in the sulfate soundness tests and shall conform to the following gradation:

Weight of Stones	Percent of Total Weight Less than the Stone Weight
200 lbs	100
130 lbs	80
90 lbs	50
25 lbs	10 max.

13. Gravel Surfacing: Meet the following requirements for gravel surfacing, including added binder or blending material:

Sieve Size	Percent Passing By Weight
3/4"	100
No. 4	40-80
No. 10	25-60
No. 200	8-20

- a. Dust Ratio: the portion passing the No. 200 (0.075 mm) sieve cannot exceed two-thirds of the portion passing the No. 40 (0.425 mm) sieve.
 - b. For material passing the No. 40 (0.425 mm) sieve, the liquid limit must not exceed 35 and the plasticity index must not be below 6 or above 12.
 - c. A wear factor not exceeding 40% at 500 revolutions.
 - d. At least 35% by weight of the aggregate retained on the No. 4 (4.75 mm) sieve must have one fractured face.
14. RAP Surfacing: Unprocessed Recycled Asphalt Pavement (RAP) that has not been processed for gradation and binder content uniformity. RAP stockpile may be from different sources of unprocessed RAP together provided it is generally free of contamination from dirt, debris, clean stone, concrete, etc. Provide unprocessed RAP that has 100 percent passing the 5/8-inch sieve.

15. MSE Wall Backfill: Sand and gravel or sand and rock mixture with a Plastic Index less than or equal to 6. The Material shall meet the following requirements:

Sieve Size	Percent Passing By Weight
1"	100
3/4"	75 - 100
No. 4	40 - 70
No. 40	10 - 60
No. 200	0 - 5

2.2 UNSUITABLE MATERIALS

- A. Unsuitable material include the materials listed below:

1. Soils which, when classified under ASTM D 2487 – Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System), fall in the classification of Pt, OH, CH, MH, or OL.
2. Soils which cannot be compacted sufficiently to achieve the density specified for the intended use.
3. Materials that contain hazardous or designated waste materials including petroleum hydrocarbons, pesticides, heavy metals, and any material which may be classified as hazardous or toxic according to applicable regulations.
4. Soils that contain greater concentrations of chloride or sulfate ions, or have a soil resistivity or pH less than the existing on-site soils.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Notify Engineer prior to starting any grading operations.
- B. Identify required lines, levels, contours and datum.
- C. Identify and flag surface and aerial utilities, known underground utilities locations.
- D. Maintain and protect existing utilities which pass through the work area.

3.2 SITE CONTROL

- A. Unfavorable Weather: Do not place, spread, or roll any fill material during unfavorable weather conditions. Do not resume operations until moisture content of material is satisfactory.

- B. Flooding: Provide berms or channels to prevent flooding or saturation of subgrade. Promptly remove all water collecting in depressions.
- C. Softened Subgrade: Where soil has been softened or eroded by flooding or placement during unfavorable weather, remove all damaged areas and recompact as specified for fill.
- D. Dust Control: Use all means necessary to control dust on and near the work and on and near all off-site borrow areas as specified in Section 01 50 00 – Temporary Facilities and Controls. Thoroughly moisten all surfaces as required to prevent dust from being a nuisance to the public, neighbors, residents, properties, and concurrent performance of other work on the site.
- E. Noise Control: Use equipment that is equipped with adequate noise attenuation devices.

3.3 OFF-SITE IMPACTS

- A. Comply with all traffic and hauling requirements of the State and County.
- B. Provide all signing, flagmen, or other special traffic control required to provide for the safety of the public.
- C. Use only vehicles approved for highway use and comply with all load requirements.
- D. Provide wheel cleaning as required to minimize the tracking of materials onto public roadways.

3.4 PROTECTION

- A. Protect trees and other features to remain as a portion of the final landscaping or project.
- B. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from equipment and vehicular traffic.
- C. Protect above and below grade utilities which are to remain.
- D. Notify Engineer of unexpected subsurface conditions and discontinue affected work in the area until notified to resume work.
- E. Grade excavation top perimeter to prevent surface water runoff into excavation.

3.5 EXCAVATION

- A. Excavate all cut areas to the grades shown on the plans.
- B. Excavate all areas that have excessive moisture content and cannot be compacted to the required densities.
- C. Correct unauthorized excavation at no cost to the Owner.
- D. Excavate or scarify and aerate soils with excessive moisture content, and allow to dry.

3.6 SUBGRADE PREPARATION

- A. Excavate to subgrade elevation.
- B. In the presence of a materials testing company, thoroughly proofroll with a loaded tandem-axle dump truck with a minimum weight of 20 tons, or 40-ton static roller.
- C. Areas where soft or disturbed conditions are identified, excavate, remove and dispose of unsuitable soft spot material. If the material is suitable except for excessive moisture content, scarify and dry the material to the acceptable moisture content, or replace with Engineer approved materials, and recompact to the density of the material to place over the area. Soft spot repair shall be incidental to the Work. No special payment will be made for soft spot repair.
- D. The Contractor's materials testing company to submit a subgrade inspection report noting the means and methods used to proofroll the subgrade and any corrections or repairs made.

3.7 CONSTRUCTION OF EMBANKMENTS

- A. Fill areas to contours and elevations as shown on the plans. Do not use frozen materials.
- B. Place and compact fill materials in continuous lifts not exceeding six (6) inches in depth, unless specifically allowed.
- C. Employ a placement method so as not to disturb or damage utilities in trenches.
- D. Maintain optimum moisture content of materials to attain required compaction density.
- E. Make smooth changes in grade. Blend slopes into level areas.

3.8 IMPORTED STRUCTURAL FILL

- A. Granular material with more than 30% by weight retained on the 3/4-inch sieve shall be compacted to a minimum 75 percent of maximum index density as determined by ASTM D4253 and D4254. Drain rock and crushed stone backfill material does not require compaction.

3.9 DISPOSAL OF WASTE SOIL

- A. Contractor shall dispose of waste material at an off-site location determined by the Contractor.

3.10 QUALITY CONTROL

- A. Material & Compaction Testing: All soils testing of samples submitted by the Contractor will be done by an independent testing laboratory mutually agreed upon by Contractor and Owner and at the Contractor's expense. If tests indicate work does not meet specific compaction requirements, remove work, replace, and retest at the Contractor's expense.

1. Qualifications of testing company
 - a. Basic requirements of ASTM E 329, "Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials as Used in Construction" and ASTM D 3666, "Standard Specification for Minimum Requirements for Agency Testing and Inspecting Bituminous Paving Materials", as applicable.
 - b. Calibrate testing equipment at reasonable intervals by devices of accuracy traceable to either the National Bureau of Standards or accepted values of natural physical constants.
2. Frequency of Compaction Tests
 - a. Curbs and sidewalks: In horizontal plane, test at start with subsequent tests a maximum of every 250 feet. At landscape islands test each island at one location. At every horizontal location, obtain one test at subgrade. Perform subsequent tests every 12 inches of compacted depth and at top of backfill or when materials or procedures change. Perform a minimum of two (2) tests at finished grade.
 - b. Along exterior basement walls and retaining walls: In horizontal plane, test each backfill area with subsequent test for every 100 lineal feet of wall, a minimum of two test per exterior wall side, At every horizontal location, obtain one test at subgrade. Perform subsequent tests every 12 inches of compacted depth and at top of backfill or when materials or procedures change.

3.11 TOLERANCES

- A. Finished grade of graded areas shall meet the following requirements:
 1. In landscaped areas or similar areas, plus or minus two (2) inches.
 2. Differential grades between walking surfaces shall not exceed 1/4-inch.
 3. Landscape finish grade adjacent to concrete walks shall be minus 1-inch from walking surface elevation.

END OF SECTION 31 00 00

SECTION 31 11 00 - CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Provide removal of trees, stumps, shrubs, grass and other vegetation within the construction limits to permit construction of the new facilities.
- B. Protect the adjoining properties from damage during clearing and grubbing operations.

PART 2 - PRODUCTS NOT USED

PART 3 - EXECUTION

3.1 CLEARING AND GRUBBING

- A. Clearing and grubbing shall extend to no more than 3 feet outside of the construction limits. The clearing and grubbing operation shall be conducted in a manner which will not damage any vegetation outside of the clearing and grubbing limits. All brush, roots, and other debris within the grubbing limits shall be removed to a depth of 6". Completely remove stumps and other debris protruding through the subgrade surface. The Contractor shall chop all brush and debris resulting from the Clearing and Grubbing operation and haul to a disposal site located by the Contractor off-site. Burning of debris on-site will not be allowed.

3.2 STRIPPING

- A. Areas within the limits of the project shall be stripped to remove topsoil containing organic material before construction begins over such areas. The topsoil shall not be used in construction of onsite fills or trench backfills. The topsoil shall be hauled to a disposal site located by the Contractor off-site.

END OF SECTION 31 11 00

SECTION 31 23 16.26 - ROCK REMOVAL

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Perform rock excavation as necessary for installation of structures, pipelines, utilities, and other services. Provide all labor, materials, and equipment as required for rock excavation including drilling, and related work specified herein.
- B. Rock excavation is permitted where standard excavation equipment cannot effectively remove rock within the area provided for excavation.
- C. Rock excavation is incidental to the work. No additional payment will be made regardless of quantity.

1.2 STORAGE PLANS FIELD MEASUREMENTS

- A. Mark excavation limits on the ground prior to performing work.
- B. Verify that survey benchmark and intended elevations for the work are as shown in the drawings.

PART 2 - PRODUCTS

2.1 ROCK PROTECTION

- A. Chain Link Fence, Type 3: Fencing shall be installed, where shown, on the plans per WSDOT Standard Plan L-20.10-03.

PART 3 - EXECUTION

3.1 ROCK PROTECTION

- A. Complete scaling of the rock face prior to installing the chain link fence.
- B. The Contractor shall determine the method of installation of the chain link fencing.

3.2 DISPOSAL OF EXCAVATED ROCK

- A. Dispose legally offsite all excavated rock that is unsuitable for backfill material. For processing of the rock for structural fill material reference Section 31 00 00 - Earthwork.

END OF SECTION 31 23 16.26

SECTION 31 23 33 - TRENCHING AND BACKFILLING**PART 1 - GENERAL****1.1 WORK INCLUDED**

- A. Provide all excavation of trenches, bedding, and backfilling work for construction of piping.
- B. Excavation of trenches shall include all material excavated or removed regardless of type, character, composition or condition of the material.

1.2 SUBMITTALS

- A. The Contractor shall submit samples of all materials proposed to be used in work. Sample sizes shall be determined by the testing laboratory.

1.3 DEFINITIONS

- A. Pipe Zone: That portion of the vertical trench cross-section lying between a plane below the bottom surface of the pipe and a plane 6 inches above the top of the pipe.
- B. Trench Zone: The portion of the vertical trench cross-section lying between the Pipe Zone and a point 18 inches below the finished grade.
- C. Final Backfill: The portion of the vertical trench cross-section within 18 inches of finished grade.
- D. Pipe Bedding: Material placed below the pipe and in the Pipe Zone.
- E. Springline: The center axis of the pipe.
- F. Trench Backfill: Material placed from the top of the Pipe Zone to finished grade.
- G. Trench Foundation Material: Material placed below the Pipe Bedding.

PART 2 - PRODUCTS**2.1 PIPE BEDDING MATERIAL**

- A. Pipe bedding shall consist of crushed stone backfill (bedding chips) material per Section 31 00 00 - Earthwork.

2.2 TRENCH BACKFILL MATERIAL

- A. Excavated trench material may be used as follows:
1. Excavated trench material shall be free from cinders, ashes, refuse, organic and frozen material, boulders with any dimension exceeding 8 inches, or other unsuitable material per Section 31 00 00 - Earthwork.
 2. Material with excessive or deficient moisture content will not be considered as unsuitable if the moisture content can be adjusted to a level that allows obtaining compaction.
 3. Imported backfill material shall conform to imported trench backfill (8" Pit Run) per Section 31 00 00 - Earthwork.

2.3 IDENTIFICATION TAPE AND LOCATING WIRE

- A. Locating wire shall be No. 12 AWG insulated cooper locating wire with 1/64" PVC insulation.
- B. Identification tape shall be 3-inches wide, 4 mil polyethylene vinyl. Tape text and color shall meet the following requirements

Pipe Contents	Text	Color
Potable Water	"CAUTION – WATER LINE BURIED BELOW"	Blue
Pressure Sewer	"CAUTION – SEWER LINE BURIED BELOW"	Green
Reclaimed Water	"CAUTION – RECLAIMED WATER LINE BURIED BELOW"	Purple
Pressure Irrigation	"CAUTION – IRRIGATION LINE BURIED BELOW"	Purple
Gas	"CAUTION – GAS LINE BURIED BELOW"	Yellow
Telephone	"CAUTION – PIPE LINE BURIED BELOW"	Yellow
Cable TV	"CAUTION – PIPE LINE BURIED BELOW"	Yellow
Electric	"CAUTION – ELECTRICAL LINE BURIED BELOW"	Red

PART 3 - EXECUTION

3.1 EXISTING UTILITIES:

- A. The Contractor shall be fully responsible for any and all damage to existing or constructed utilities, and shall repair damages in accordance with utility owner's requirements at no additional cost to the Owner. It shall be the Contractor's responsibility to coordinate and notify all affected utility owners. Call 811 Dig-Line before commencing construction.
1. Parallel Utility Support: Work associated with parallel utility support and utility crossings shall be incidental to the work unless a specific bid items is provided for parallel utility support.

2. Utility Crossing Support: All utilities that interfere with the construction of the trenching and pipe installation shall be temporarily supported in accordance with the utility owner's requirements. Work associated with utility crossings support shall be incidental to the work unless a specific bid items is provided for utility crossing support.
3. All crossing utilities shown on the plans and marked by Dig-Line shall be vertical and horizontally located, in a non-destructive manner, prior to construction to verify pipe elevation, materials, and diameter. This information shall be provided to the Engineer for evaluation of conflicts prior to construction. All potholes shall be backfilled immediately after obtaining information.

3.2 TRENCH EXCAVATION

- A. Trenches shall be excavated to lines and grades shown on the drawings, with a minimum width at the top or crown of the pipe not to exceed the outside diameter of the pipe plus 2'. In the event the Contractor should over excavate in width or depth without the Engineer's approval, he shall provide pipe bedding for the full length of the over excavation. No special payment will be made for work caused by over excavation.
- B. Trench shall be kept free from water at all times to facilitate fine grading, proper laying and joining of pipe, and prevention of damage to completed joints.
- C. If the trench bottom is disturbed during excavation, compact trench bottom to 95% maximum density of the standard proctor, ASTM D698.
- D. The Contractor shall conduct trench operations in such a manner as to provide adequate safety precautions for workmen, adjacent property, or the public at all times by use of adequate sheeting, shoring, or bracing to sustain stability of the trench floor and walls. The Contractor shall furnish, place, and maintain such shoring as may be required to support sides of the trench. Costs of shoring and bracing shall be considered incidental to trench excavation and backfill.
- E. The Contractor shall conduct trench operations in such a manner as to provide adequate safety precautions for workmen, adjacent property, or the public at all times by use of adequate sheeting, shoring, or bracing to sustain stability of the trench floor and walls. The Contractor shall furnish, place, and maintain such shoring as may be required to support sides of the trench.

3.3 PIPE BEDDING

- A. Place bedding in layers no thicker than 6 inches. Allow for bedding depth around pipe bells. Place bedding at least 4 inches below the pipe and 6 inches above the pipe.
- B. Shovel slice and tamp to ensure that the bedding material is firmly placed.
- C. Following placement of pipe, place additional bedding material up to the springline of the pipe. Shovel slice and tamp to ensure that the bedding material fills in and supports the pipe haunch area.

- D. In 6 inch lifts, place additional bedding layers from the pipe springline to 6 inches above the pipe.

3.4 TRENCH BACKFILL

- A. All backfill material shall be placed in layers not to exceed 8-inch maximum loose lift thickness for native material and 12-inch maximum loose lift thickness for imported aggregate backfill.
- B. The entire trench shall be compacted to 95% maximum density of the standard proctor as determined by ASTM D-698.
- C. Trenches under buildings and structures shall be compacted, the entire depth, to 95% maximum density of the modified proctor determined by ASTM D1557.

3.5 IDENTIFICATION TAPE AND LOCATING WIRE PLACEMENT

- A. Unless indicated otherwise, attach locating wire to the crown of all buried pipelines using electrical tape, except gravity irrigation, sanitary sewer, or storm sewer mains having visible manholes or clean-out structures at all angle points. Provide 12" of slack wire above ground at each location of valve or wire box.
- B. Unless indicated otherwise, identification tape shall be placed above all buried pipelines, 18" - 24" above the crown of the pipe, except gravity irrigation, sanitary sewer, or storm sewer mains having visible manholes or clean-out structures at all angle points.
- C. Unless indicated otherwise, identification tape shall be placed above all buried pipelines that are installed with locating wire. Identification tape shall be placed 18" - 24" above the crown of the pipe.

3.6 QUALITY CONTROL

- A. Material & Compaction Testing: All soils testing of samples submitted by the Contractor will be done by a testing laboratory mutually agreed upon by Contractor and Owner and at the Contractor's expense. If tests indicate work does not meet specific compaction requirements, remove work, replace, and retest at the Contractor's expense.
 - 1. Qualifications of testing company
 - a. Basic requirements of ASTM E 329, "Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials as Used in Construction" and ASTM D 3666, "Standard Specification for Minimum Requirements for Agency Testing and Inspecting Bituminous Paving Materials", as applicable.
 - b. Calibrate testing equipment at reasonable intervals by devices of accuracy traceable to either the National Bureau of Standards or accepted values of natural physical constants.
 - 2. Frequency of Compaction Tests

- a. Test section shall be a test at 2-feet above top of pipe and every 1-foot lift thereafter and at the top of the trench backfill.
- b. Two (2) test sections, at different locations for every trench less than 300 feet in length, but not less than once per day.
- c. One (1) test section per every 300 feet of additional trench and at locations where materials or construction procedures change, but not less than once per day.

3.7 CLEANUP

- A. Surplus excavated material or stripped material not salvaged as topsoil and excavated material not meeting the requirements for backfill shall become waste. All waste material shall be disposed of by the Contractor.

END OF SECTION 31 23 33

SECTION 32 12 16 – ASPHALT PAVING

Asphalt shall be per 2022 WSDOT Standard Specifications for Road, Bridge, and Municipal Construction

Division 5
Surface Treatments and Pavements

Replace 5-04.4 as follows:

5-04.4 Measurement

Measurement of asphalt pavement shall be in accordance with approved schedule of values presented by contractor to owner after award of project.

Replace 5-04.5 as follows:

5-04.5 Payment

Payment will be made for asphalt paving under the lump sum bid presented for the project according to the quantities shown on the bid documents and plans. No separate bid item, pay item will be made for payment unless included within a change order.

1.3 QUALITY CONTROL

- A. Testing Agency Qualifications: Qualified according to ASTM D3666 for testing indicated.
- B. Pre-Paving Conference: Conduct conference at Project Site. Immediately before paving, the Contractor, the asphalt supplier, the Engineer, and the Owner personnel involved in the paving operation will hold a pre-paving conference to discuss the means that will achieve the highest quality surface.
 - 1. Before the pre-paving conference, submit a Superpave HMA paving plan to the Engineer. Tailor the plan to the asphalt to be supplied, the anticipated JMF, and the Contractor's equipment and operation. Include at least the following:
 - a. Breakdown, intermediate, and finish rollers to be used
 - b. Static or vibratory rolling for breakdown and intermediate rolling
 - c. Frequency, amplitude, force/impact, and roller velocity for vibratory rolling
 - d. Proximity of breakdown roller to paver with respect to horizontal displacement
 - e. Proximity of intermediate roller to breakdown roller
 - f. Compaction temperatures for breakdown, intermediate, and finish rolling
 - g. Adjustments to paving/compaction operation with respect to temperature, amplitude, frequency, lift thickness, gradation, force/impact, and roller velocity
 - h. Rubber tired rolling with respect to pickup of pavement material
 - i. Paving equipment and preheating and vibratory settings of the screed
 - j. Coordination of plant production and paving operations; climate, haul distance
 - k. Surface and air temperatures anticipated during production
 - l. Temperature necessary to allow public traffic onto the new pavement surface
 - m. Anticipated traffic control issues as necessary
 - n. Additional equipment required
 - o. Inspection, sampling and testing requirements
 - p. Other paving issues as necessary

- C. Acceptance Test Strip: Construct an acceptance test strip in accordance with WSDOT Section 3-04 requirements for field testing prior to being incorporated into HMA and, upon request, Section 9-03.8 for certification of toxicity characteristics of aggregates for HMA.

PART 2 - PRODUCTS

2.1 PLANT MIX PAVEMENT

- A. General: Superpave hot mix asphalt shall conform to the 2022 Washington State Department of Transportation Standard Specifications
 - 1. Grade of Asphalt: PG asphalt binder meeting the requirements of AASHTO M 332 Table 1 of the grades specified in the Contract shall be used in the production of HMA.
 - 2. Aggregate Size: 1/2"
 - 3. Anti-Stripping Additive: Provide anti-stripping additive if the immersion compression retained strength (ASTM T165) of the design mix is less than 70 percent of the dry compressive strength. Anti-stripping additive shall be added at the refinery at a rate of 0.5 to 1.0 percent of asphalt cement as determined by laboratory test.

2.2 AGGREGATES

- A. General: Use materials and gradations that have performed satisfactorily in previous installations.
- B. Coarse Aggregate: ASTM D 692, sound; angular crushed stone, or crushed gravel.
- C. Fine Aggregate: ASTM D 1073, sharp-edged natural sand or sand prepared from stone, gravel, or combinations thereof.
 - 1. For plant mix asphalt, limit natural sand to a maximum of 20 percent by weight of the total aggregate mass.
- D. Mineral Filler: ASTM D 242, rock or slag dust, hydraulic cement, or other inert material.

2.3 AUXILIARY MATERIALS

- A. Tack Coat: ASTM D 977 emulsified asphalt, or ASTM D 2397 cationic emulsified asphalt, slow setting, diluted in water, of suitable grade and consistency for application.

PART 3 - EXECUTION

3.1 GENERAL

- A. Do not place pavement on a wet or frozen surface or when weather or surface conditions will otherwise prevent the proper handling or finishing of the pavement placement.

B. Air and Surface Temperature Limitations:

Compacted Thickness of Individual Courses	Top Course	Leveling and Courses Below the Top Course
Less than 1.5"	60°F	-
1.5" to 3"	50°F	40°F
Greater than 3"	40°F	40°F

- C. Asphalt concrete shall not be placed when the surface and atmospheric temperature is below 40 degrees F, if rain is imminent or expected before time required for adequate cure, or if subgrade is wet or excessively damp.

3.2 SURFACE PREPARATION

- A. Aggregate base shall be provided where indicated to the thickness indicated. The compacted surface of the finished aggregate shall be hard, uniform, smooth and at any point shall not vary more than 0.02 feet from the indicated grade or cross-section.
- B. Proof-roll subgrade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
 2. Proof roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons.
 3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed at no cost to the Owner.
- C. Proceed with paving only after unsatisfactory conditions have been corrected.
- D. Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Verify that subgrade is dry and in suitable condition to begin paving.
- E. Tack Coat: Apply uniformly to vertical surfaces abutting or projecting into new, plant mix asphalt paving at a rate of 0.05 to 0.15 gal./sq. yd.
1. Allow tack coat to cure undisturbed before applying plant mix asphalt paving.
 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.3 PATCHING

- A. Plant Mix Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches minimum into adjacent sound pavement. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound-aggregate base course to form new subgrade.
- B. Patching: Fill excavated pavements with plant mix asphalt base mix for full thickness of patch and, while still hot, compact flush with adjacent surface.

3.4 SUPERPAVE HOT MIX ASPHALT PAVING

- A. Machine place Hot Mix Asphalt on prepared surface, spread uniformly, and strike off. Place Hot Mix Asphalt by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
 - 1. Place Hot Mix Asphalt base course in number of lifts and thicknesses indicated.
 - 2. Place Hot Mix Asphalt surface course in single lift.
 - 3. Spread mix at minimum temperature of 250 deg F (121 deg C).
 - 4. Begin applying Hot Mix Asphalt along centerline of crown for crowned sections and on high side of one-way slopes unless otherwise indicated.
 - 5. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place Hot Mix Asphalt in consecutive strips not less than 10 feet (3 m) wide unless infill edge strips of a lesser width are required.
 - 1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete a section of asphalt base course before placing asphalt surface course.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with plant mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.5 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of Hot Mix Asphalt courses.
 - 1. Clean contact surfaces and apply tack coat to joints.
 - 2. Offset longitudinal joints, in successive courses, a minimum of 6 inches.

3. Offset transverse joints, in successive courses, a minimum of 24 inches.
4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method.
5. Compact joints as soon as Hot Mix Asphalt will bear roller weight without excessive displacement.
6. Compact asphalt at joints to a density within 2 percent of specified course density.

3.6 COMPACTION

- A. General: Begin compaction as soon as placed plant mix paving will bear roller weight without excessive displacement. Compact plant mix paving with hot, hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
 1. Do not operate vibratory rollers in the vibratory mode when the internal mix temperature is less than 175 °F or when checking or cracking of the mat occurs at a higher temperature.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while plant mix asphalt is still hot enough to achieve specified density. Continue rolling until plant mix asphalt course has been uniformly compacted to the following density:
 1. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent nor greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while plant mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh, plant mix asphalt. Compact by rolling to specified density and surface smoothness.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.7 INSTALLATION TOLERANCES

- A. Pavement Thickness: Compact each course to produce the thickness indicated within the following tolerances:
 - 1. Surface Course: Plus 1/4 inch, no minus.
- B. Pavement Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
 - 1. Surface Course: 1/8 inch.
 - 2. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.
 - 3. Profilers shall be Class I or Class II as defined by ASTM E950. Profilers shall be operated in accordance with the manufacturer's instructions and AASHTO PP-50. Profiler settings shall be as follows:
 - a. High pass or pre-filter-off or a minimum of 200 feet.
 - b. Bump detection — on
 - c. Dip detection — on
 - d. Resolution — 0.01 (0.25mm)
 - e. Low pass filter — off
 - f. All other filters — off
 - 4. Profiles shall be made 3 feet from and parallel to each edge of each traffic lane. The average of the results for each 0.1 mile section will be used to determine sections requiring corrective action.
 - 5. The profiling equipment shall be operated at a speed no greater than that recommended by the manufacturer. It shall be calibrated at the beginning of the project and as needed thereafter.
 - 6. Individual high points in excess of 0.3 inch with a 25-foot distance or less, as determined by the California Profilograph simulations, shall be reduced by grinding until such high points do not exceed 0.3 inch.
 - 7. After grinding has been completed to reduce individual high points in excess of 0.3 inch, additional grinding shall be performed in sections requiring corrective action to reduce the IRI to a maximum of 8.30 inches in any 0.1 mile section along any line parallel with the pavement edge.

C. Corrective Actions:

1. Grind the asphalt pavement to within the surface smoothness tolerance, if thickness permits in accordance with the above criteria.
2. All grinding shall be done parallel to centerline. Adjacent grinder passes within any single ground area shall be extended to produce a neat rectangular area having a uniform surface appearance. At transverse boundaries between ground and unground areas, smoothly feathered transitions shall be made.
3. The Contractor shall check the pavement for smoothness after grinding, in accordance with this specifications and shall make any additional corrections necessary to the pavement to achieve smoothness.
4. After grinding has been completed, the ground pavement surface shall receive a fog coat at a rate approved by the Engineer.
5. The cost of such grinding or milling, and all related work such as fog coat, disposal of milled material, traffic control, flagging, profiling, surface repair of ground or milled areas, and temporary pavement markings shall be at the Contactor's expense.
6. If correction of the pavement as listed above will not produce satisfactory results as to smoothness, or will reduce pavement thicknesses and serviceability excessively, the pavement shall be removed and replaced or overlaid to correct the deficiency at no additional cost to the project.

3.8 FIELD QUALITY CONTROL & ACCEPTANCE

- A. Thickness: The Contractor shall extract core samples from the in-place compacted plant mix pavement. Thickness will be determined according to ASTM D 3549.
1. Take two samples minimum. Take one core samples for every 3,500 square feet, at least one sample every day.
 2. Tolerance: Plus 1/4 inch (6 mm), no minus.
 3. If more than 25% of pavement core samples fail to meet thickness requirements with a tolerance of 0-1/4" minus of the project requirements, or if more than 10% fail to meet thickness requirements with a thickness deficit greater than 1/4", corrective actions shall be taken at no additional cost to the Owner.
 4. Corrective Actions:
 - a. Install 1.5-inch asphalt overlay with same Job Mix Formula and Plant Mix Pavement, if grades allow, or
 - b. Remove and replace pavement to specified thickness, grades, and smoothness.

- c. If allowed by the Engineer, adjusts price for asphalt pavement that does not meet thickness requirements in accordance with the following pay factor (PF) reductions:
 - 1) If thickness is $\geq 100\%$ of Required Thickness, PF = 1.0.
 - 2) If thickness is 1/4" less than the Required Thickness, PF = 0.80.
 - 3) If thickness is 1/2" less than the Required Thickness, subject to rejection, if allowed to remain in place, the PF will be 0.75.
- 5. Core Samples during Pavement Placement: If cores are taken during placement of pavement, fill core sample holes with hot mix asphalt.
- 6. Core Samples after Pavement Placement: If cores are taken after placement of pavement, fill core sample hole with 4,000 psi concrete. Prevent concrete from staining asphalt pavement by using a plastic sheet around the core hole while filling with concrete. Tap plastic sheet down.
- B. The relative density after compaction shall be 92-96 percent of the density obtained by using ASTM D 1188 or D 2726. A properly calibrated nuclear asphalt testing device shall be used for determining the field density of compacted asphalt concrete, or slabs or cores may be laboratory tested in accordance with ASTM D 1188.

3.9 CLEAN-UP

- A. After Work of this Section is complete, remove all debris, rocks, gravel, excess asphalt.

END OF SECTION 32 12 16

SECTION 32 13 13 - CONCRETE FOR EXTERIOR IMPROVEMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Furnish all labor, materials, and equipment required for concrete work including forming, reinforcing steel, anchor bolts, and site concrete.
- B. Anchor bolt templates to be supplied by light pole manufacturer.

1.2 JOB CONDITIONS

- A. In hot and cold weather, comply with the requirements of ACI 305 and 306.
- B. Do not place concrete on frozen ground. Unless adequate protection is provided, do not place concrete during rain, sleet, or snow.
- C. Do not allow rain water to increase mixing water or damage surface finish.
- D. When temperature of surrounding air is expected to be below 40°F, during placing, or within 24 hours thereafter, do not allow concrete temperature to drop below 55°F, for sections less than twelve inches (12") in any dimension, or 55°F, for any other sections.
 - 1. Keep the temperature of concrete, when placed, under 80°F, to preclude loss of slump, flash set, or cold joints.
 - 2. When temperature of steel is greater than 120°F, spray steel forms and reinforcement with water just prior to placing concrete. Do not allow any water to pond in forms.

1.3 SUBMITTALS

- A. Submit mix design to be used for each class of concrete.
- B. Submit location of materials source, admixtures to be used, and other related data.
- C. Submit test reports showing suitability of aggregates used in concrete mixes.
- D. Indicate sizes, spacing, locations of reinforcing steel, wire fabric, bending and cutting schedules, splicing, stirrup spacing, supporting, and spacing devices.
- E. Alkali-Silica Reaction (ASR) test results.
- F. Control joint placement plan.
- G. The Contractor shall pay any material testing expenses associated with material submittals.

PART 2 - PRODUCTS

2.1 CONCRETE MATERIALS

- A. Portland Cement: Use Portland cement conforming to the requirements of ASTM C 150 Type II for low alkali cement.
- B. General Admixtures: Admixtures, other than air-entraining agents, may be used when the type and amount to be used are approved. Calcium chloride will not be allowed as an admixture.
- C. Air-Entraining Agents: Use air-entraining agents conforming to the requirements of ASTM C 260. Air entraining admixtures shall be added to the mixing water.
- D. Water Reducing Agents: Water reducing admixtures may be used to increase workability of the concrete when approved by the Engineer. Use water reducing admixtures conforming to ASTM C 494.
- E. Water: Use potable water for mixing concrete.
- F. General Aggregate Requirement: The proposed aggregate for the mix shall be tested for expansion and Alkali-Silica Reaction (ASR) in accordance with AASHTO T 303. Where testing indicates aggregates are reactive, the contractor shall use fly ash, lithium compound admixtures, or both to produce a concrete mix that successfully mitigates ASR. Contractor shall provide test results of successful mitigation, using ASTM C 1567, with results showing a linear expansion at 14 days not exceeding 0.10 percent when tested.
- G. Coarse Aggregate: Use coarse aggregate that consists of gravel, crushed slag, crushed stone or other approved inert materials, composed of hard, strong and durable particles, free of injurious coatings, and conforming to the requirements of ASTM C 33, except as modified herein.
 - 1. Use only aggregates that include deleterious substances not exceeding the following:

	Percent (by weight)
Soft Fragments	0.20
Coal and Lignite	0.30
Clay Lumps	.30
Other Deleterious Substances	2.0
Minus 200 Material	1.75

- 2. Use coarse aggregate meeting the following gradations when tested in accordance to the requirements of ASTM C 136.

Percent Passing (by weight)

Course Aggregate Size	1"	3/4"	3/8"	No. 4	No. 8
3/4" to No. 4	100	90-100	20-55	1-10	0-5

- H. Fine Aggregate: Use aggregate of natural sand or other approved inert materials composed of hard, strong, and durable particles conforming to the requirements of ASTM C 33 except as modified herein.

1. Use only aggregates that include deleterious substances not exceeding the following:

	Percent (by weight)
Clay Lumps	.50
Coal and Lignite	.30
Other Deleterious Substances	2.00
Minus 200 Material	1.75

2. Moisture content of fine aggregate shall not exceed 8 percent.
3. Use fine aggregate that is uniformly graded from coarse to fine within the following gradation, when tested in accordance to the requirements of ASTM C 136.

Sieve Size	Percent Passing (by weight)
3/8"	100
No. 4	95 100
No. 8	80 100
No. 16	50 85
No. 30	25 60
No. 50	10 30
No. 100	2 10

- I. Patch Mortar: Make patching mortar using portland cement and sand to form a workable mortar suitable for filling defects in concrete surfaces.

1. Mortar: 1 part portland cement to 2 parts sand by damp loose volume.
2. Mix white and gray portland cement as required to match surrounding concrete.
3. Keep mixing water to a minimum.
4. Mix patching mortar in advance and allow to stand with frequent manipulation, without addition of water, until it has reached stiffest placeable consistency.

- J. Curing Compounds: Use curing compounds that meet the requirements of ASTM C 309.
- K. Sealer: Use Conspec Silane 40 or approved equal.
- L. Joint Sealant: Use Sikaflex 1c SL or approved equal. Use Sonolastic Polysulfide Sealant or approved equal for submerged in water applications. Color to match that of concrete.

2.2 REINFORCING STEEL AND WELDED WIRE MESH

- A. Reinforcement Steel: ASTM A 615 Grade 60
- B. Welded Wire Fabric: 12x12 W5.4/5.4

2.3 FORMING MATERIALS

- A. Smooth Forms: Faced with material which will produce smooth, hard, uniform texture on concrete.
- B. Form accessories that are to be partially or wholly embedded in concrete are to be a commercially manufactured type:
 - 1. Use form ties constructed so that ends or end fasteners can be removed without causing appreciable spalling of concrete faces.
- C. Form Release Agent: Colorless material which will not stain concrete, absorb moisture, or impair natural bonding or color characteristics of coating intended for use on concrete.
- D. Contraction Joint Material: Wood strips; maximum possible length.
- E. Dobie Blocks: Commercial grade blocks to support horizontal reinforcement.

2.4 READY MIX CONCRETE

- A. Furnish commercial ready mix shall have the following properties:

Construction Type	Minimum Compressive Strength	Minimum Cement Content	Maximum Water / Cement Ratio	Air Entrainment Percentage	Maximum Slump
Light Pole, Sign, Fence Foundations	3,000 psi	560 LB/CY	0.49	6.5 ±1.5	4 ±1
Curbs, Gutters	4,000 psi	560 LB/CY	0.44	6.5 ±1.5	2.5 ±1
Concrete Pavement	4,000 psi	560 LB/CY	0.44	6.5 ±1.5	4 ±1

Construction Type	Minimum Compressive Strength	Minimum Cement Content	Maximum Water / Cement Ratio	Air Entrainment Percentage	Maximum Slump
Retaining Walls	4,000 psi	560 LB/CY	0.44	6.5 ±1.5	4 ±1
Walking Surfaces – Sidewalks, Patios, Driveways, Stairs	4,500 psi	564 LB/CY	0.44	6.5 ±1.5	4 ±1
Walking Surfaces with Reinforcement – Sidewalks, Patios, Driveways, Stairs	5,000 psi	611 LB/CY	0.40	6.5 ±1.5	4 ±1

- B. Fly ash may be used to replace a portion of the Portland cement in the concrete mix. The fly ash used shall not exceed twenty five percent of the total cement material in the mix. The cement material in the mix includes both Portland cement and fly ash. Fly Ash shall be Class F conforming to AASHTO M 295 with the additional requirement that the available alkalies in the fly ash shall not exceed 2 percent.
- C. Ready-mixed concrete shall conform to the provisions in ASTM C 94 regarding batching, mixers and agitators, mixing and delivery, inspection, consistency and air content, and certification of batches.

2.5 DRY SHAKE ANTI SKID

- A. Dry shake mix composed of 3 parts anti-slip aggregates (aluminum oxide or corundum) and one part Portland cement by weight. The anti slip aggregates shall conform to the following requirements:
1. Chemical Analysis:
 - a. Aluminum Oxide 60-70%
 - b. Ferric Oxide 20-28%
 - c. Silicon Dioxide 3-6%
 - d. Titanium Dioxide 4-7%
 - e. Calcium Oxide 1-3%
 2. Specific Gravity: 3.5 as determined by ASTM C 127

3. Hardness: 8 - Moh's Scale

2.6 TRUNCATED DOMES

- A. Detectable warning domes shall be pre-manufactured units integrally cast into concrete ramp. The detectable warning surface shall be removable. Use Replaceable Wet-Set, manufactured by ADA Solutions, or approved equal.
- B. Color shall be Federal Yellow.

PART 3 - EXECUTION

3.1 GENERAL

- A. The Contractor shall not incorporate ready mix concrete into the work that does not meet these specifications. The ready mix concrete that is in non-compliance shall be removed from the project.

3.2 FORMING

- A. Make forms sufficiently tight to prevent loss of cement paste. Arrange facing material orderly and symmetrical, keeping number of seams to a practical minimum.
- B. Place chamfer strips in corners of forms to produce beveled edges on permanently exposed surfaces.
- C. To maintain specified finish tolerances, chamfer formwork to compensate for anticipated deflections.
- D. Provide positive means of adjustment using wedges or jacks, or shores and struts, and take up all settlement during concrete placing operation.
- E. Securely brace forms against lateral deflection.
- F. Provide temporary ports in formwork to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain. Close ports with tight fitting panels, flush with inside face of forms, neatly fitted so that joints will not be apparent in exposed concrete surfaces.
- G. At construction joints, overlap forms over hardened concrete at least six inches (6"). Hold forms against hardened concrete to prevent offsets or loss of mortar at construction joint and to maintain true surface.
- H. Anchor formwork to shores or other supporting surfaces or members so that upward or lateral movement of any part of formwork system is prevented during concrete placement.
- I. Anchor formwork to shores or other supporting surfaces or members so that upward or lateral movement of any part of formwork system is prevented during concrete placement.

- J. Position expansion joint material and other embedded items accurately and support against displacement.

3.3 REINFORCING

- A. Place all reinforcement in the exact position shown on the plans and approved shop drawings and secure in position during the placing and compacting of concrete. Wire bars together with No. 16 gage wire with ties at all intersections except where spacing is less than 12 inches in each direction, in which case tie alternate intersections.
- B. Place dobie blocks to maintain clearance from subgrade.

3.4 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Coordinate work of other sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.
- B. Install accessories in accordance with manufacturer's instructions, level and plumb with templates where necessary. Ensure items are not disturbed during concrete placement.

3.5 CONVEYING CONCRETE MIX

- A. Unless specifically approved by the Engineer prior to placement of ready mix concrete, all concrete mix shall be placed and discharged completely within 90 minutes of the introduction of water into the mix or before the drum has been revolved 300 revolutions, whichever comes first.
- B. Handle concrete from mixer to location of final placing as rapidly as practicable by methods which prevent segregation or loss of ingredients, and assure that quality is maintained.
- C. Use only equipment conforming to ASTM C 94.
- D. Use only approved pumping equipment that is rated for the lift and the capacity required for placement.
 - 1. Control pneumatic placement to prevent segregation.
 - 2. Loss of slump in pumping or pneumatic conveying equipment shall not exceed two inches (2").
 - 3. Do not use aluminum or aluminum alloy pipes.

3.6 TRUNCATED DOMES

- A. Place truncated domes in fresh concrete in accordance with manufacture's recommendations.

3.7 CONTROL JOINTS

- A. For flatwork, place control (contraction) joints of the type indicated in the plans prior to concrete curing.
- B. Install joints spaced no more than 24 times the slab thickness (i.e. a 4-inch thick slab shall have a control joint at least every 96-inches = 8-feet). Contraction joints should be placed to produce panels that are as square as possible and never exceeding a length to width ratio of 1 ½ to 1
- C. Joint depth shall be at least 25% of slab depth.
- D. Tooled joints shall be installed using a grooving tool. Contraction joints may be tooled into the concrete surface at the time of placement. Joints may be tooled into the surface (first pass) prior to the onset of bleeding or immediately with the first pass of the floating operation.
- E. Sawcut joints between 6-12 hours after finishing concrete, unless specifically approved otherwise by the engineer. Sawcut as soon as the concrete is hard enough to withstand the energy of sawing without raveling or dislodging aggregate particles, and that the edges abutting the cut do not chip from the saw blade.

3.8 DRY SHAKE ANTI SKID

- A. Where specified in the plans, top newly placed, uncured concrete with a dry shake mix after the concrete has been placed, screeded and floated, and surface water has disappeared. Shake mix shall be hand applied at a rate of 60 to 100 pounds per 100 square feet of surface. Subsequent to application, the mix shall be power floated lightly to partially imbed the anti-slip aggregates and then steel trowelled until the aggregate surface is uniform and lightly textured.

3.9 REMOVAL OF FORMS

- A. Formwork for columns, walls, and other parts not supporting weight of concrete may be removed as soon as concrete has hardened sufficiently to resist damage from removal.

3.10 FINISHES

- A. Provide formed concrete walls to be left exposed.
 - 1. Point and Patch: Patch defects, chip or rub off fins exceeding one-quarter inch (1/4) in height with Patch Mortar. Patch tie holes and defects and remove fins completely. When surface texture is impaired and form joints misaligned by more than one-eighth (1/8) inch, grind or bushhammer.
- B. Concrete flatwork shall not be trowelled, use screed, float, and broom.
- C. Stairs to receive a light broom finish parallel to the nose of the tread. And shall receive nose end treatment as shown in the plans.
- D. Sidewalks to receive a light broom finish perpendicular to the direction of travel.

- E. Patios to receive light broom finish.
- F. Curbs and Gutter to receive light broom finish parallel to flow line of gutter.
- G. Pedestrian ramps to receive a light broom finish perpendicular to the direction of travel.
- H. Light pole, sign, fence foundations to receive light broom finish.

3.11 CURING AND PROTECTION

- A. To preserve moisture in unformed concrete surfaces, apply one of the following immediately after placement and finishing.
 - 1. Continuous mist spray.
 - 2. Waterproof sheet materials, ASTM C 171.
 - 3. Curing compound, ASTM C 309. Apply in accordance with recommendations of manufacturer immediately after water sheen has disappeared. Do not use on any surface against which additional concrete or other material is to be bonded or adhesively applied, unless it is proven that curing compound will not prevent bond, or unless positive measures are taken to remove it completely from areas to receive bonded applications. Provide curing compound compatible with hardener in areas where hardener is to be used.
- B. Cure concrete for seven (7) days.
- C. When mean daily outdoor temperature is less than 40°F, maintain temperature of concrete between 50°F and 70°F for required curing period.

3.12 SEALER

- A. Apply sealer to vertical walls, stairs, and walkways. Apply two coats. Apply in accordance with manufactures recommendations.

3.13 TESTING

- A. The Contractor shall obtain and pay for the services of certified materials testing laboratory to perform all sampling and testing of installed materials to assure that the requirements of this specification are met. The Contractor shall pay all testing costs associated with product submittal prior to use in the Work.
- B. Perform the following testing:
 - 1. Entrained Air – Test every 30 yards of concrete delivered to the project.
 - 2. Slump – Test every 30 yards of concrete delivered to the project.
 - 3. Strength characteristics – Test every 30 yards of concrete placement with four compressive test cylinders.

4. Temperature: If air temperature is less than 40°F, test every 30 yards of concrete delivered.
- C. Test results shall be reported in writing to the Engineer within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
- D. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.

3.14 ACCEPTANCE

- A. The Engineer will base acceptance of the concrete on parameters specified for the given concrete class. The Engineer will base acceptance of strength from the results of 28-day compression strength test results on cylinders made from concrete being placed. The engineer will consider average strength from three companion cylinders as one test.
- B. Replace unacceptable concrete at no additional cost to the Owner.
- C. The Engineer will use a price adjustment for concrete that does not meet the intended strength, but is allowed to remain in place by the Engineer, in accordance with the following pay factor (PF) reductions:
 1. If compression strength is $\geq 100\%$ of required, PF = 1.0.
 2. If compression strength is $\geq 95\% < 100\%$ of required, PF = 0.90.
 3. If compression strength is $\geq 90\% < 95\%$ of required, PF = 0.80.
 4. If compression strength is $< 90\%$ of required, subject to rejection, if allowed to remain in place, the PF will be 0.50.

3.15 SPECIAL WARRANTY

- A. Scaled or spalled surfaces exceeding 5% (randomly dispersed or concentrated) per twenty (20) square feet of concrete surfacing area will be considered defective and shall be replaced at the Contractor's expense. The area requiring replacement will be as directed by the Engineer.

END OF SECTION 32 13 13

SECTION 32 17 23 – PAVEMENT MARKING

Pavement markings shall be in accordance with 2022 WSDOT Standard Specifications for Road, Bridge, and Municipal Construction:

**Division 8
Miscellaneous Construction**

8-22 PAVEMENT MARKINGS

Replace 8-22.4 as follows:

8-22.4 Measurement

Measurement of pavement markings shall be in accordance with approved schedule of values presented by contractor to owner after award of project.

Replace 8-22.5 as follows:

8-22.5 Payment

Payment will be made for pavement markings under the lump sum bid presented for the project according to the quantities shown on the bid documents and plans. No separate bid item, pay item will be made for payment unless included within a change order.

Additionally, refer to WSDOT Standard Plans for pavement marking details:

M-3.40-04 – TWO-WAY LEFT-TURN AND MEDIAN CHANNELIZATION

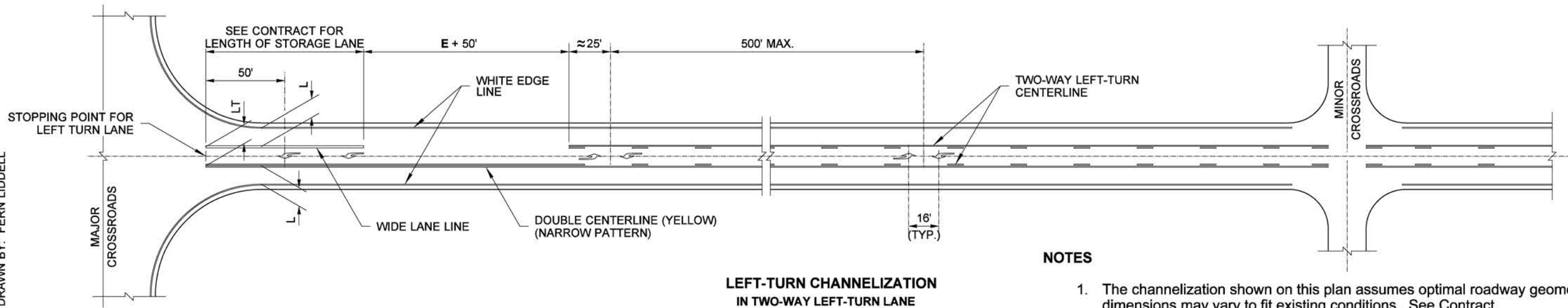
M-5.10-03 – RIGHT TURN CHANNELIZATION

M-9.50-02 – BICYCLE LANE SYMBOL LAYOUT

M15.10-01 – CROSSWALK LAYOUT

M-20.10.03 – LONGITUDINAL MARKING PATTERNS

DRAWN BY: FERN LIDDELL



LEFT-TURN CHANNELIZATION
IN TWO-WAY LEFT-TURN LANE

NOTES

1. The channelization shown on this plan assumes optimal roadway geometric design. The dimensions may vary to fit existing conditions. See Contract.
2. The channelization shown on this plan is for a two-lane highway. The channelization plan may be used on four-lane undivided highways with the appropriate considerations.
3. Centerline striping on the approach to raised channelization shall be No Pass in accordance with MUTCD figure 3B-15. Centerline striping on the departure from raised channelization shall be determined by an engineering study.
4. Centerline striping on the approach to and departure from painted channelization shall be determined by an engineering study.
5. Centerline striping on four-lane undivided highways shall be a double centerline.
6. The two Type 2L (SL) Traffic Arrows shown in the left-turn storage lane are optional, but recommended. Arrows may be added for longer storage lanes or deleted for shorter storage lanes. See Contract Plans.

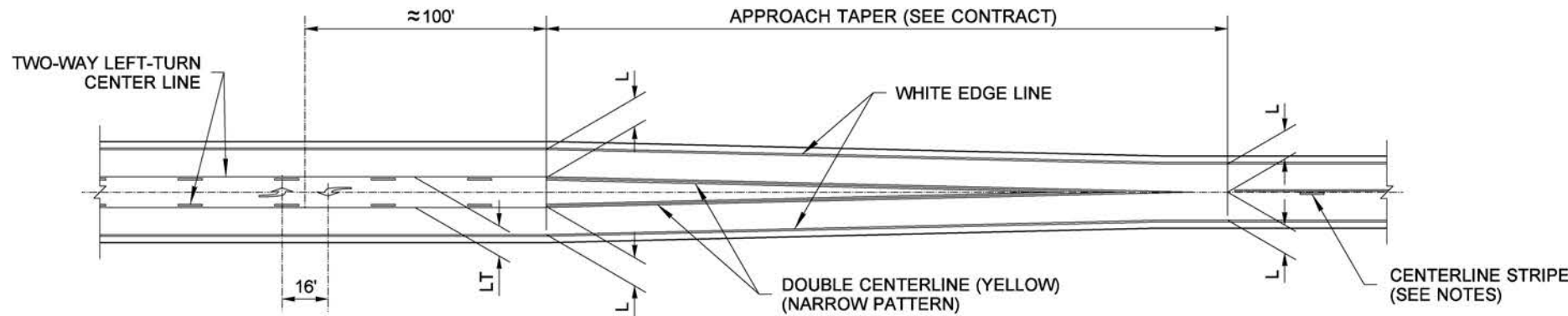
LEGEND

L = Lane Width. See Contract for specified lane widths.
L T = Left -Turn Lane width. See Contract

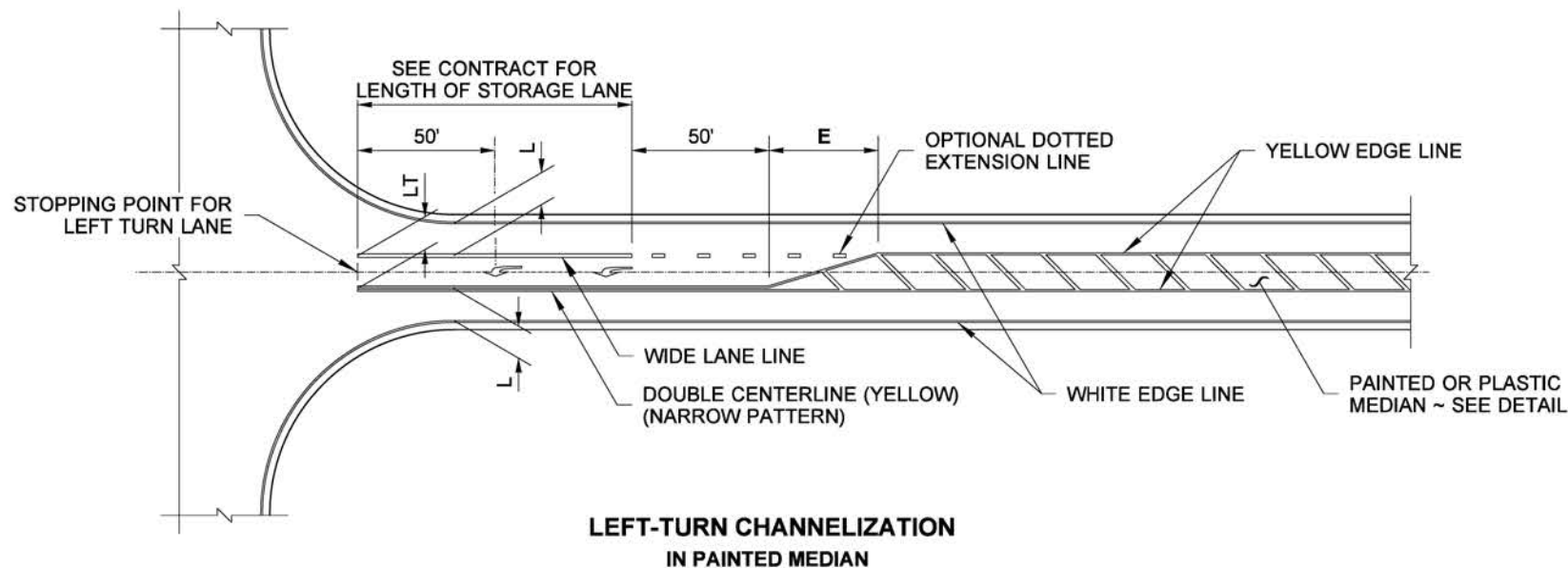
↵ Type 2L (SL) Traffic Arrow

POSTED SPEED	DIMENSION E ^①
60 MPH	180'
55 MPH	180'
50 MPH	180'
45 MPH	180'
40 MPH	120'
35 MPH	120'
30 MPH	120'
25 MPH	120'
20 MPH	120'

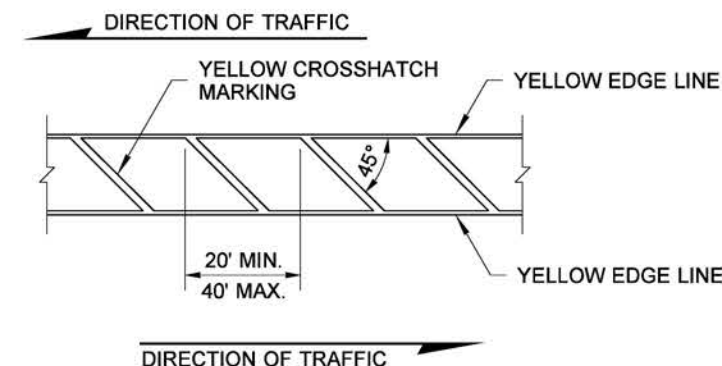
① Can be reduced to a minimum of 50' to increase storage capacity.



TWO-WAY LEFT-TURN LANE
TRANSITION



LEFT-TURN CHANNELIZATION
IN PAINTED MEDIAN



PAINTED OR PLASTIC MEDIAN
COMPOSED OF LONGITUDINAL MARKINGS



Walsh, Brian
Sep 23 2020 2:03 PM

TWO-WAY LEFT-TURN AND MEDIAN CHANNELIZATION STANDARD PLAN M-3.40-04

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Date: 2020.09.25

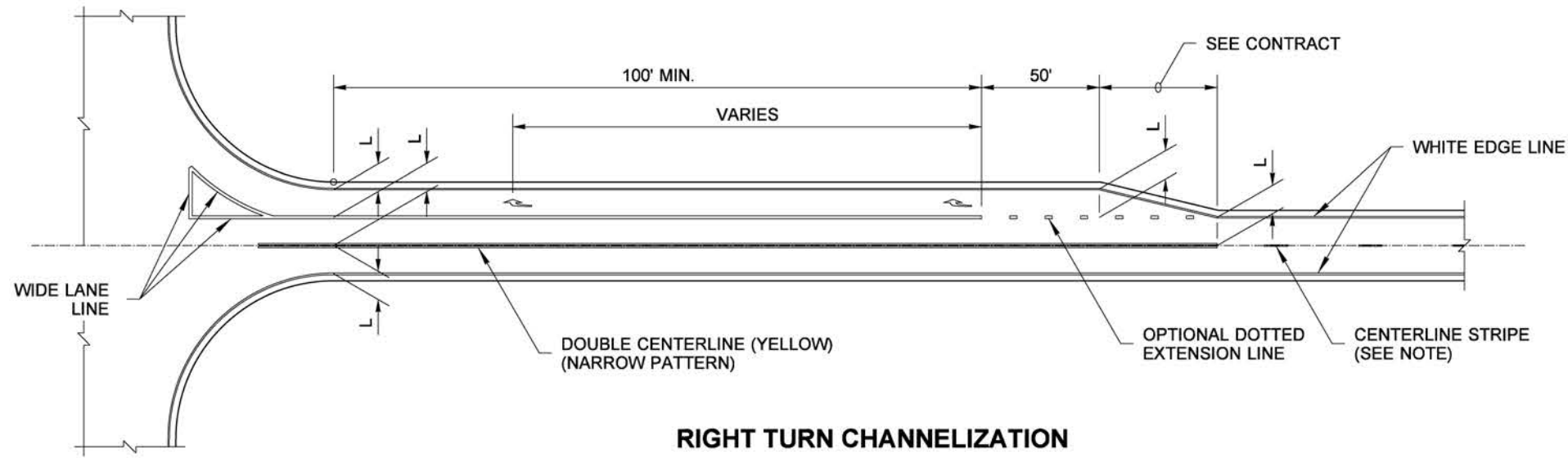
14:55:19 -07'00'

STATE DESIGN ENGINEER



Washington State Department of Transportation

DRAWN BY: FERN LIDDELL



NOTES

1. The channelization shown on this plan assumes optimal roadway geometric design. The dimensions may vary to fit existing conditions. See Contract.
2. The channelization shown on this plan is for a two-lane highway. The channelization plan may be used on four-lane undivided highways with the appropriate considerations.
3. Centerline striping on the approach to raised channelization shall be No Pass in accordance with MUTCD figure 3B-15. Centerline striping on the departure from raised channelization shall be determined by an engineering study.
4. Centerline striping on the approach to and departure from painted channelization shall be determined by an engineering study.
5. Centerline striping on four-lane undivided highways shall be a double center line.
6. All Traffic Arrows not required are optional, but recommended. Arrows may be added for longer storage lanes, or deleted for shorter storage lanes. See Contract Plans.

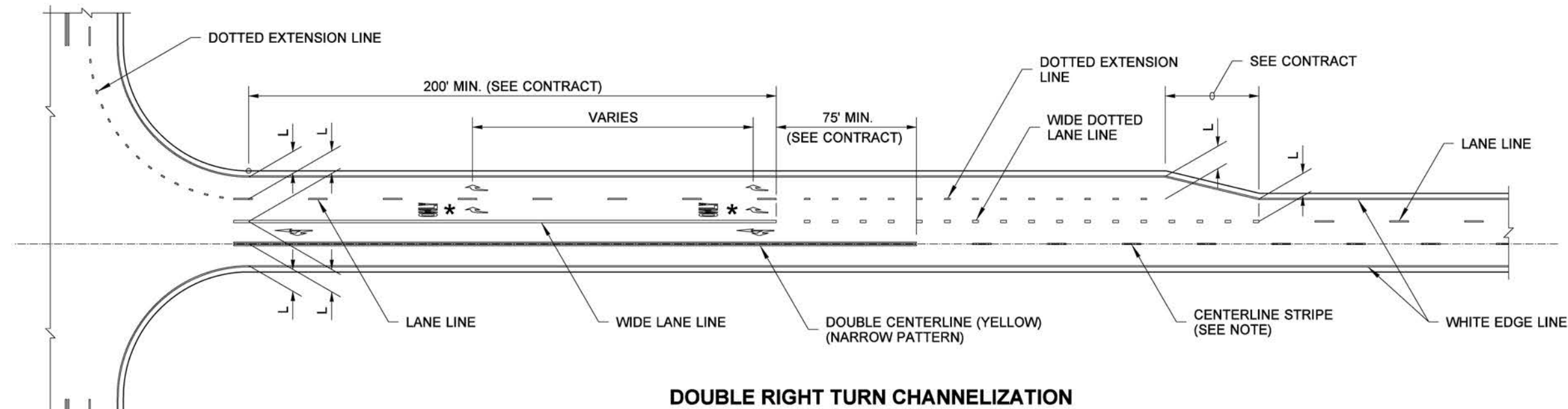
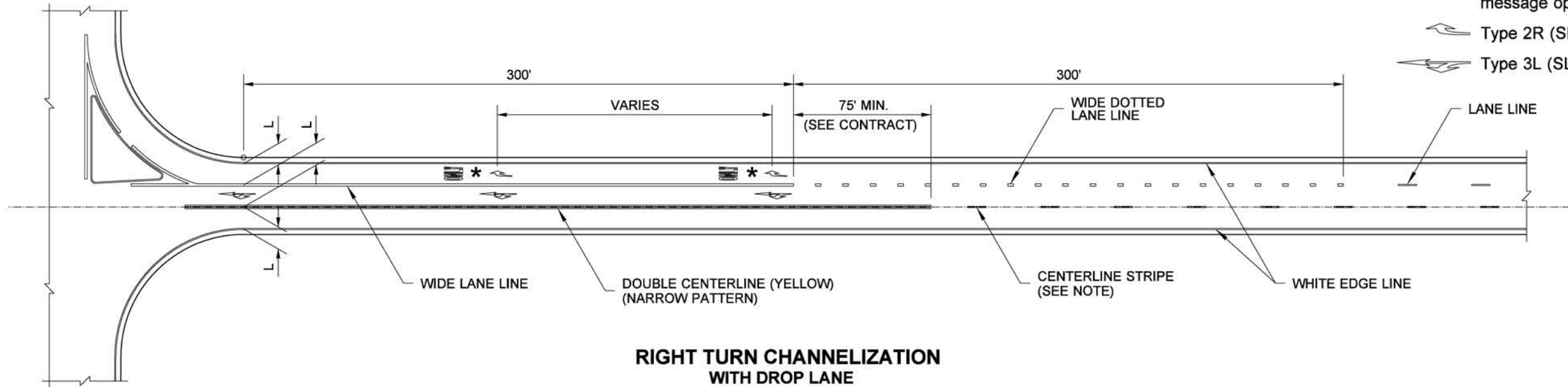
LEGEND

L = Lane Width. See Contract for specified lane widths.

* = Denotes required traffic arrow. Accompanying ONLY word message optional. See **Standard Plan M-80.10** for spacing.

 Type 2R (SR) Traffic Arrow

 Type 3L (SL) Traffic Arrow



Brian J. Walsh Walsh, Brian
Sep 23 2020 3:45 PM

RIGHT TURN CHANNELIZATION STANDARD PLAN M-5.10-03

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

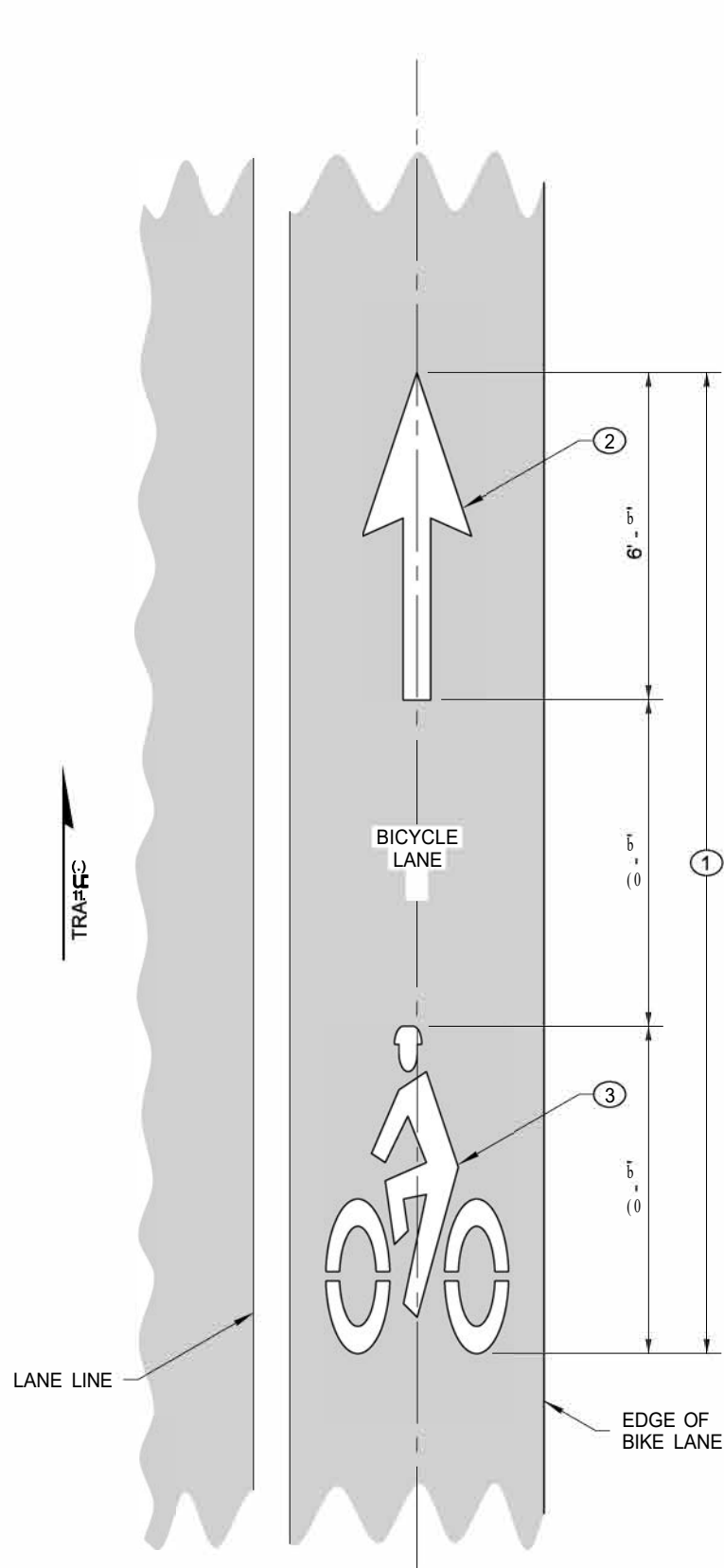
Date: 2020.09.25

14:57:04 -07'00'

STATE DESIGN ENGINEER



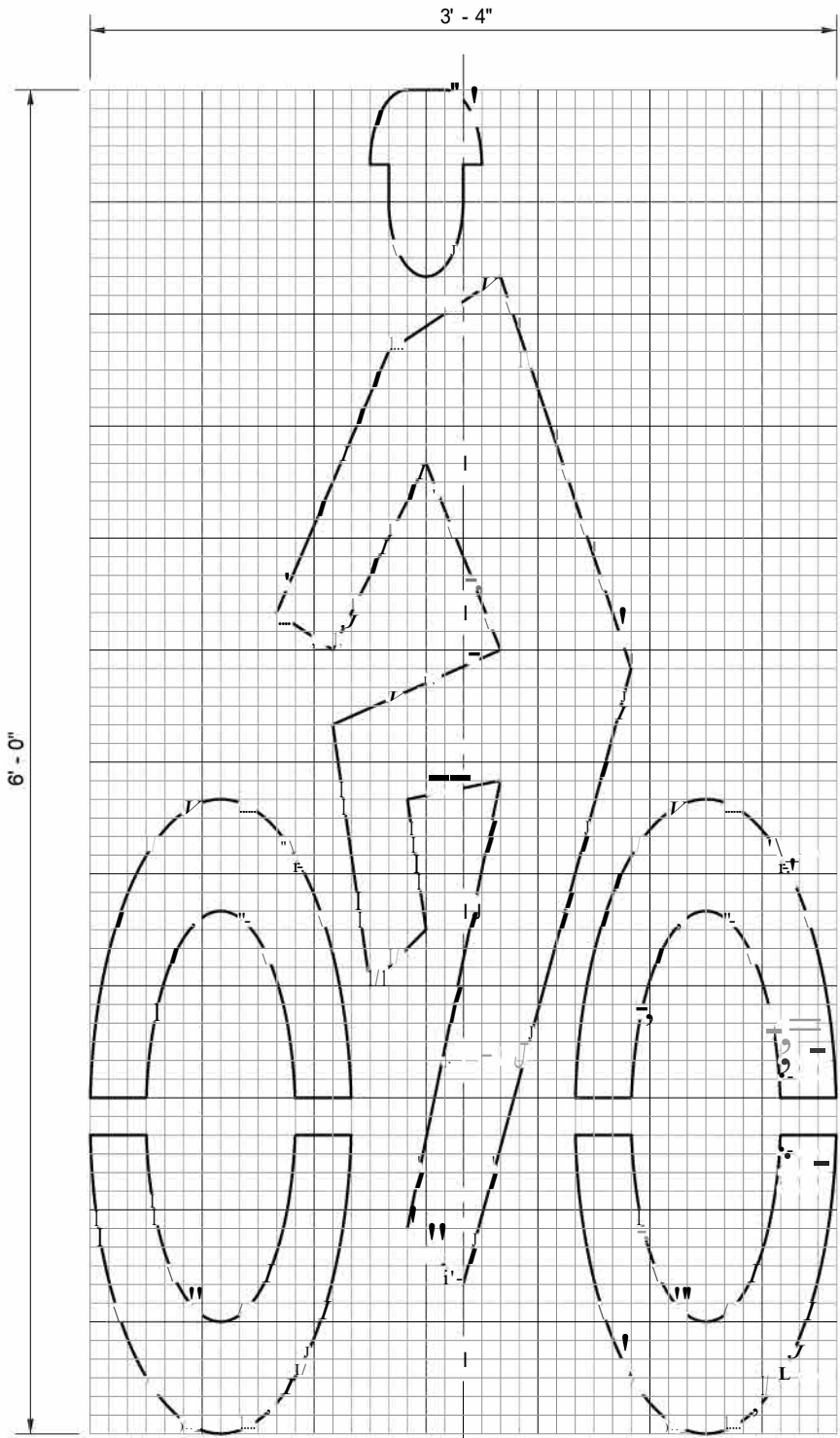
Washington State Department of Transportation



**BICYCLE LANE SYMBOL
LAYOUT**

KEYNOTES

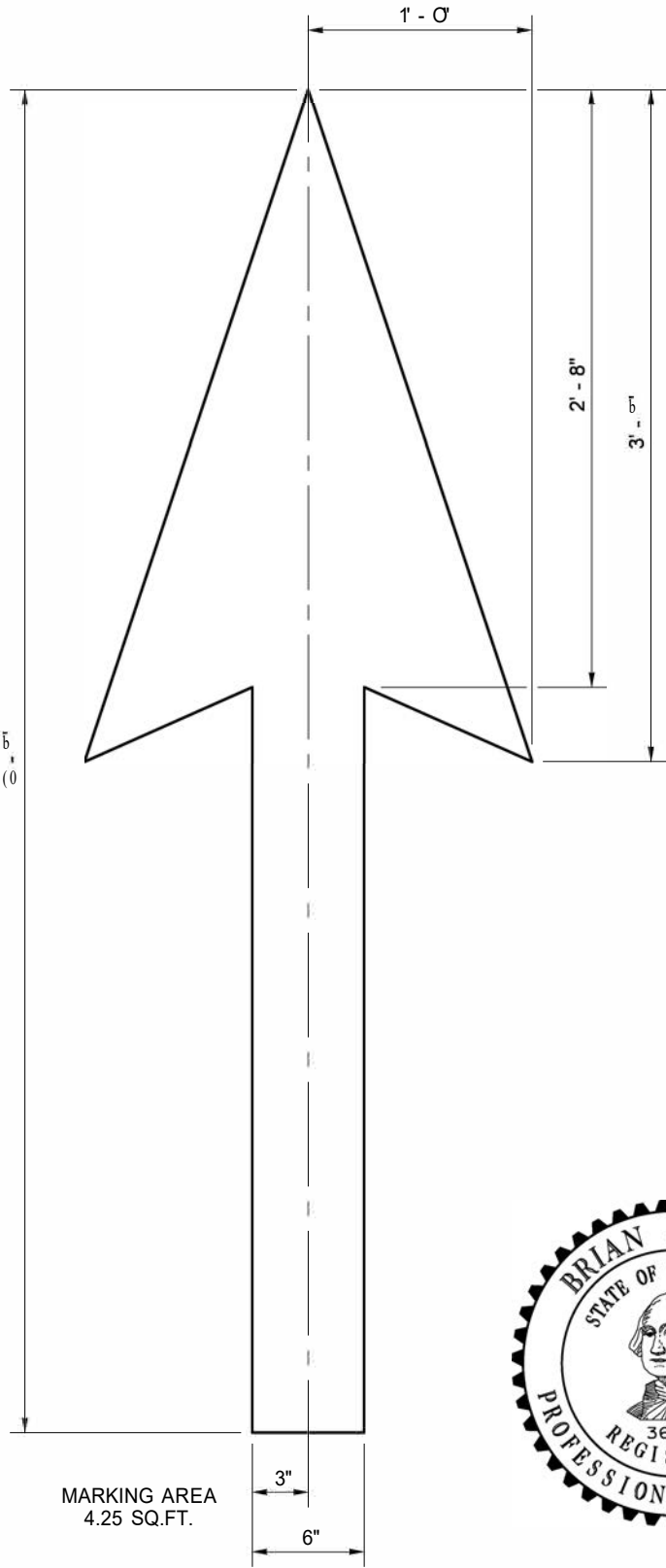
- G) Bid Item "Bicycle Lane Symbol" includes Bike Lane Arrow and Bike Rider Symbol.
- 2' (ft) x 6' (ft) White Bike Lane Arrow.
- G) Bike Rider Symbol.



**BIKE RIDER SYMBOL
DETAIL**

GENERAL NOTE

See Contract for location and material requirements.



**BIKE LANE ARROW
DETAIL**

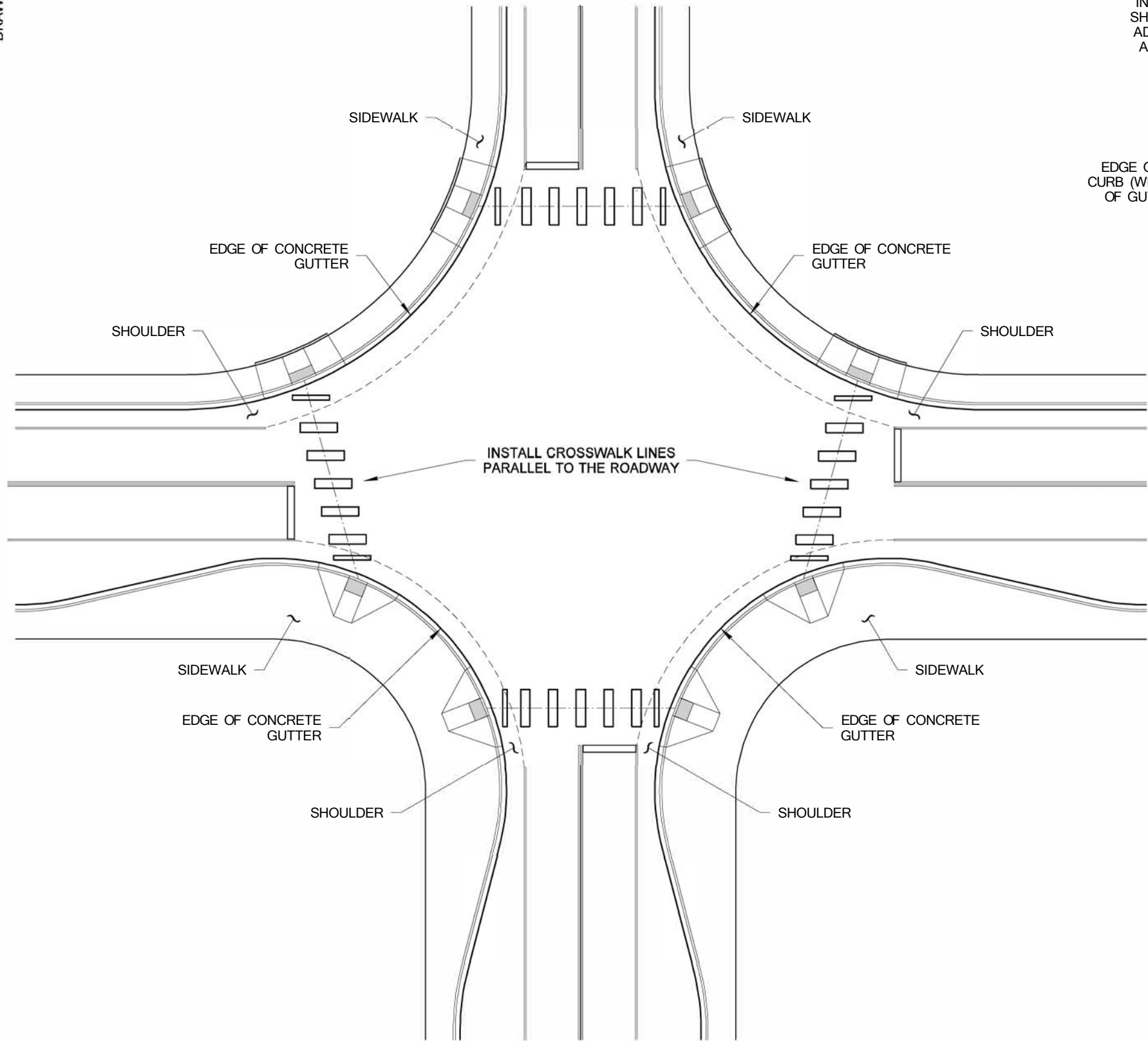


**BICYCLE LANE SYMBOL
LAYOUT**

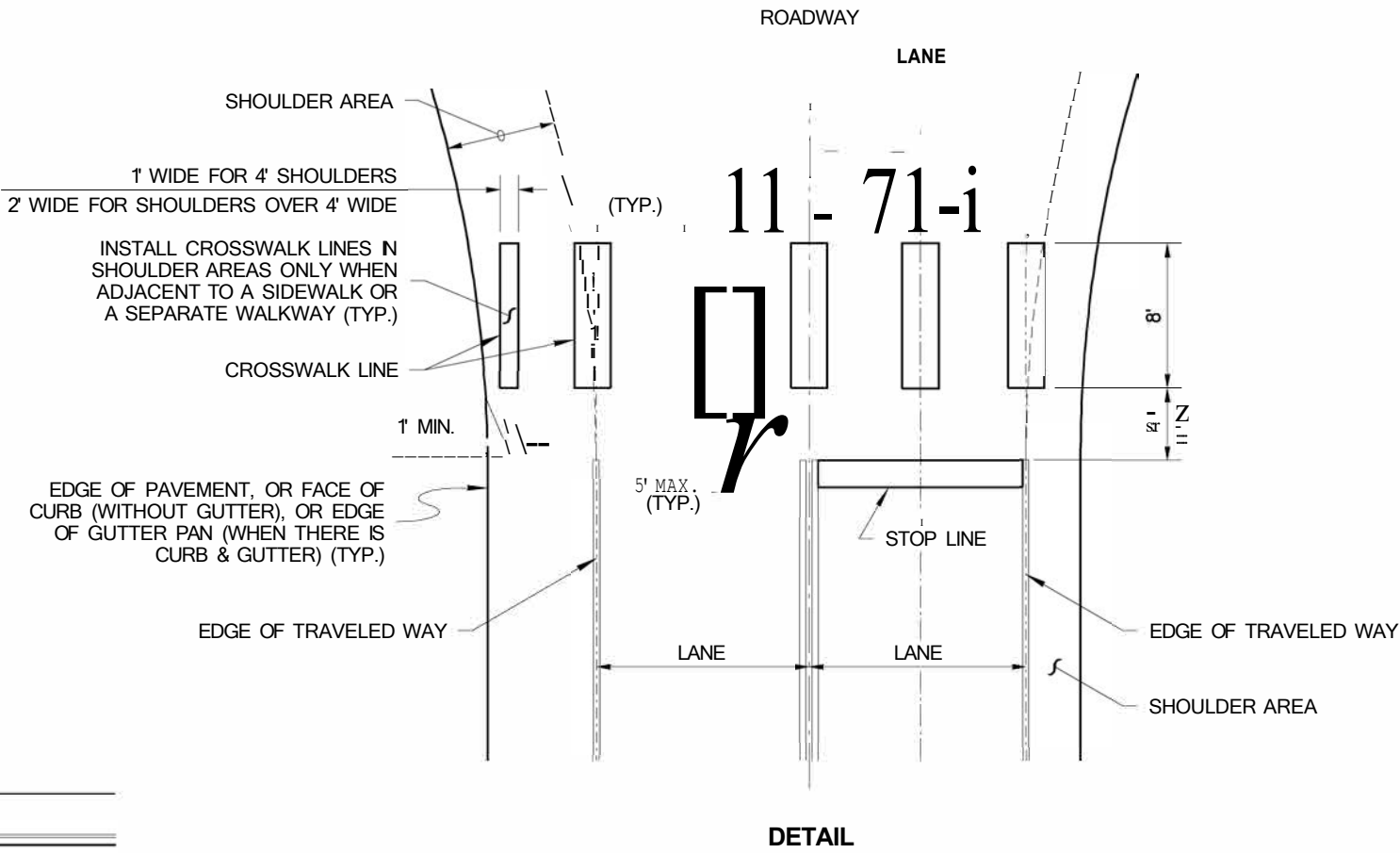
STANDARD PLAN M-9.50-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION



TYPICAL APPLICATIONS



DETAIL

NOTES

1. See the Contract Plans for locations of crosswalk centerlines.
2. To the maximum extent possible, curb ramp centerline should be perpendicular to the crosswalk centerline.
3. To the maximum extent possible, crosswalks should be perpendicular to the centerline of the traveled way.



EXPIRES AUGUST 9, 2007

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

CROSSWALK LAYOUT

STANDARD PLAN M-15.10-01

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Ken L. Smith

STATE DESIGN ENGINEER

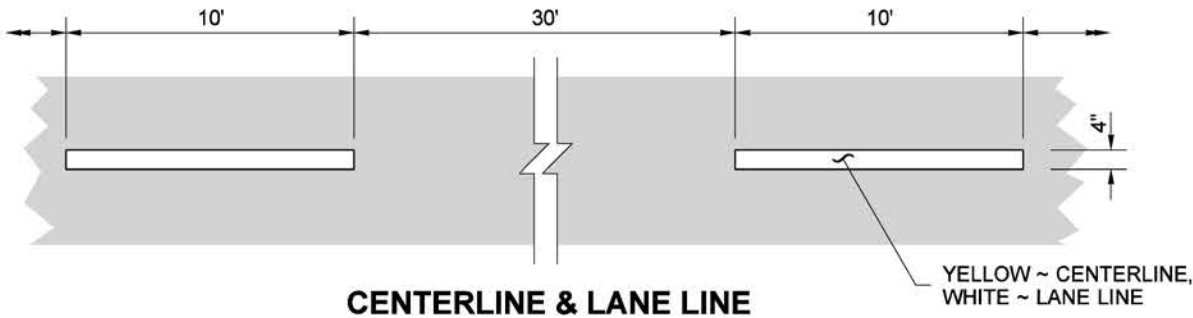
02-06-07

DATE

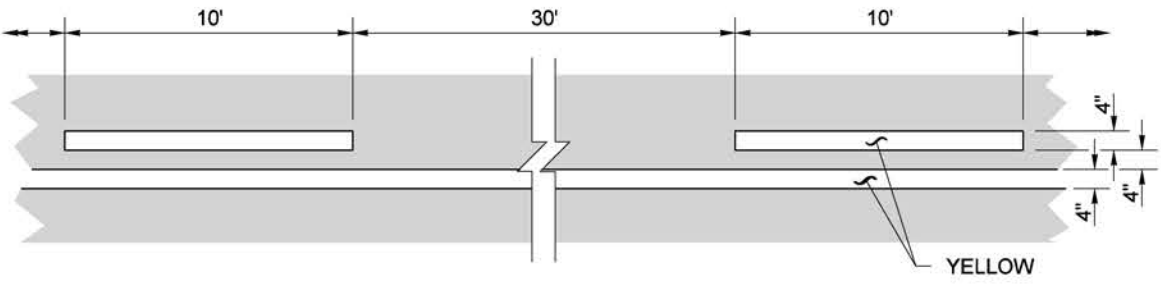


Washington State Department of Transportation

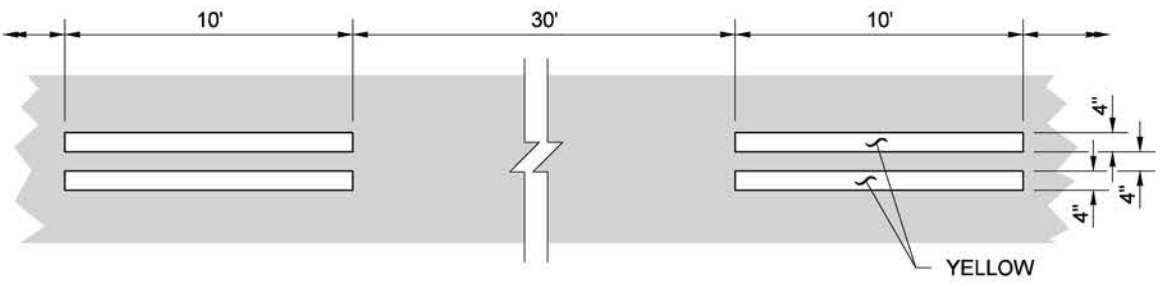
DRAWN BY: FERN LIDDELL



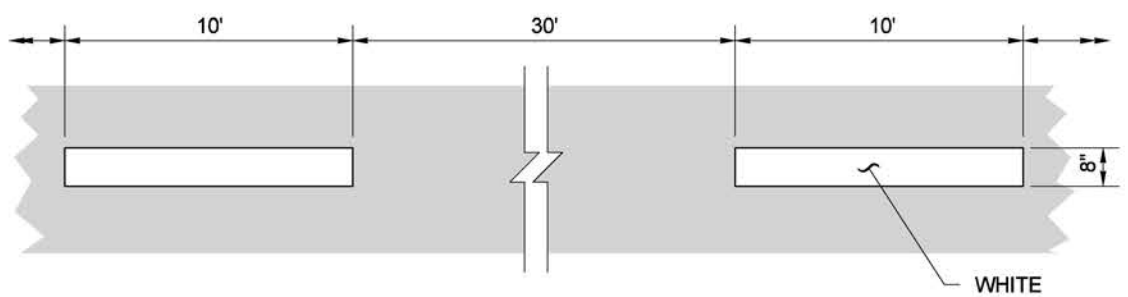
CENTERLINE & LANE LINE



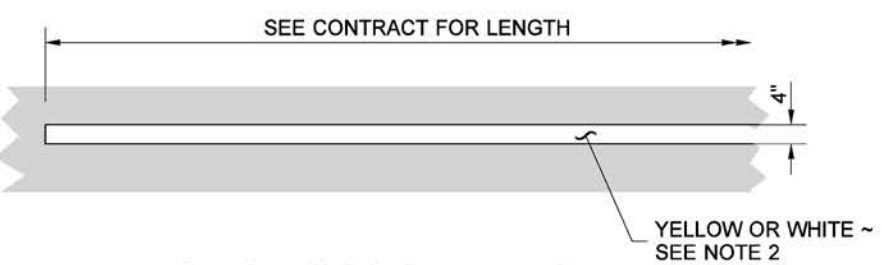
NO-PASS LINE & TWO-WAY LEFT-TURN CENTERLINE



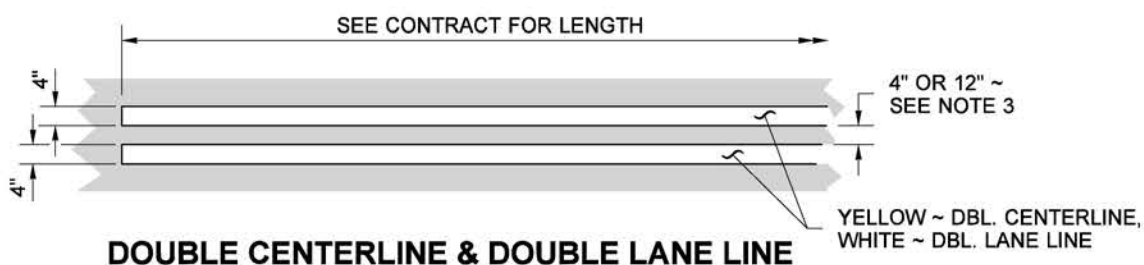
REVERSIBLE LANE LINE



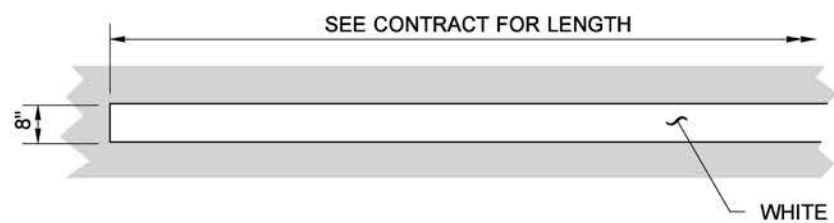
WIDE BROKEN LANE LINE



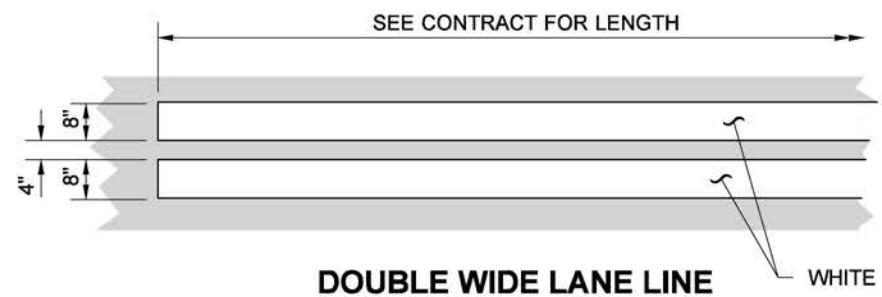
EDGE LINE & SOLID LANE LINE



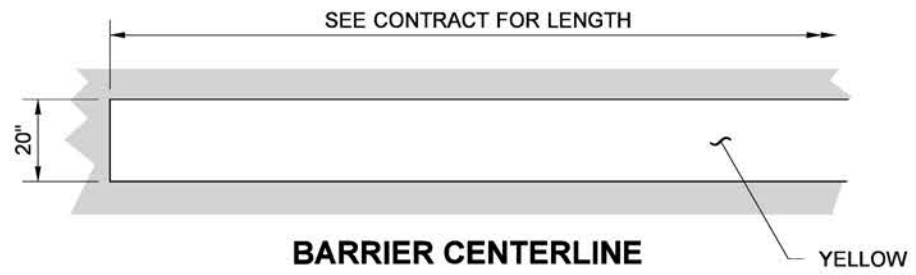
DOUBLE CENTERLINE & DOUBLE LANE LINE



WIDE EDGE LINE & WIDE SOLID LANE LINE
OPTION TO USE AS CIRCULATORY ON ROUNDABOUT APPLICATIONS



DOUBLE WIDE LANE LINE



BARRIER CENTERLINE

NOTES

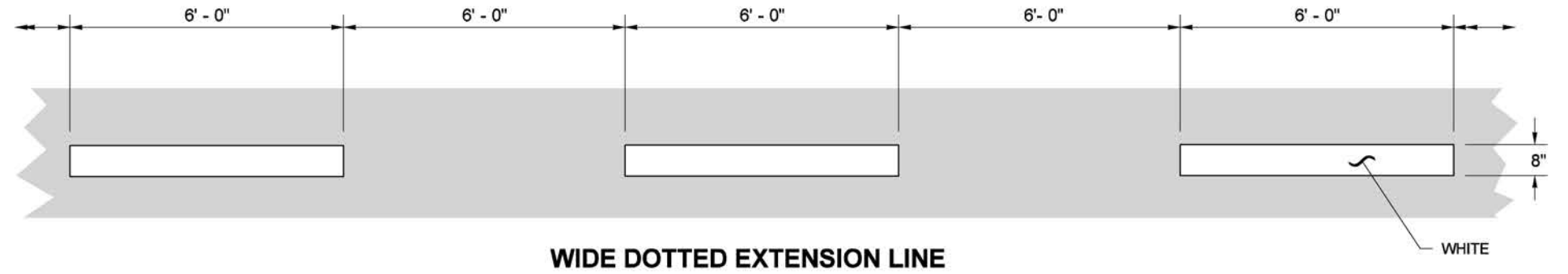
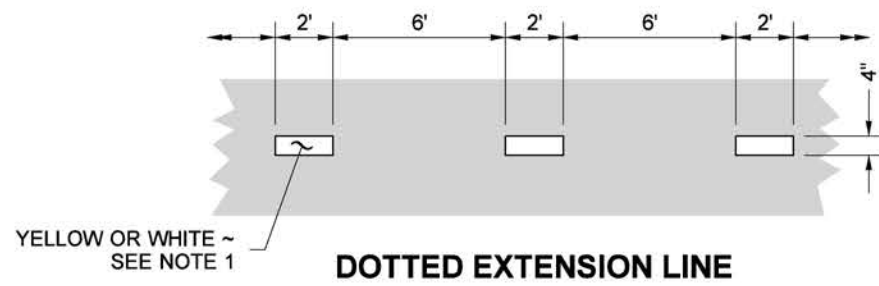
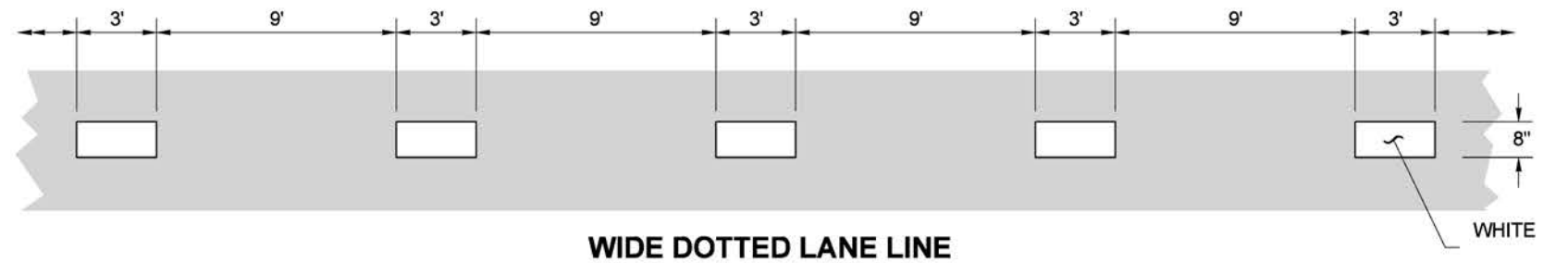
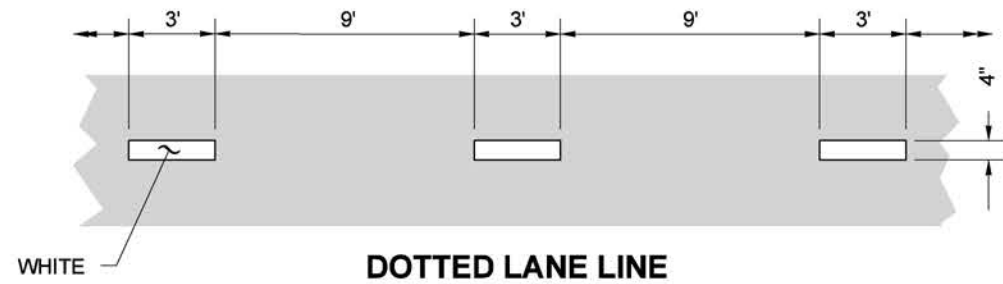
1. Dotted Extension Line shall be the same color as the line it is extending.
2. Edge Line shall be white on the right edge of traveled way, and yellow on the left edge of traveled way (on one-way roadways). Solid Lane Line shall be white.
3. The distance between the lines of the Double Centerline shall be 12" everywhere, except 4" for left-turn channelization and narrow roadways with lane widths of 10 feet or less. Local Agencies (on non-state routes) may specify a 4" distance for all locations.
The distance between the lines of the Double Lane Line shall be 4".



Walsh, Brian
Sep 23 2020 3:46 PM
cosign

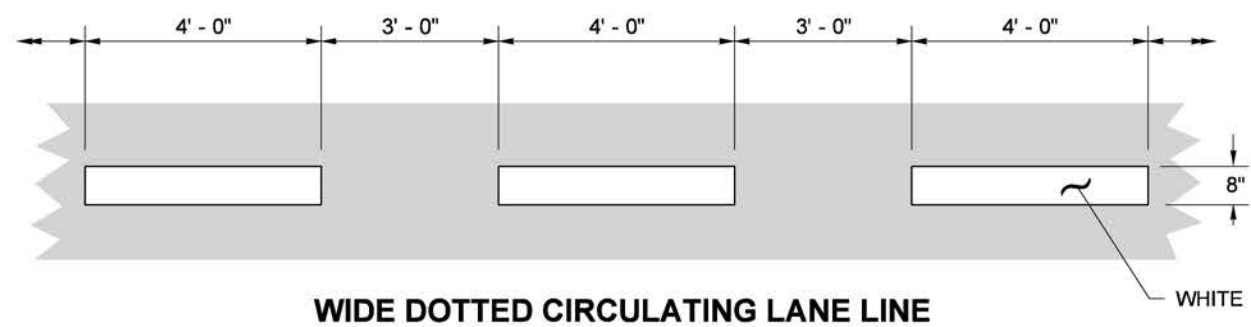
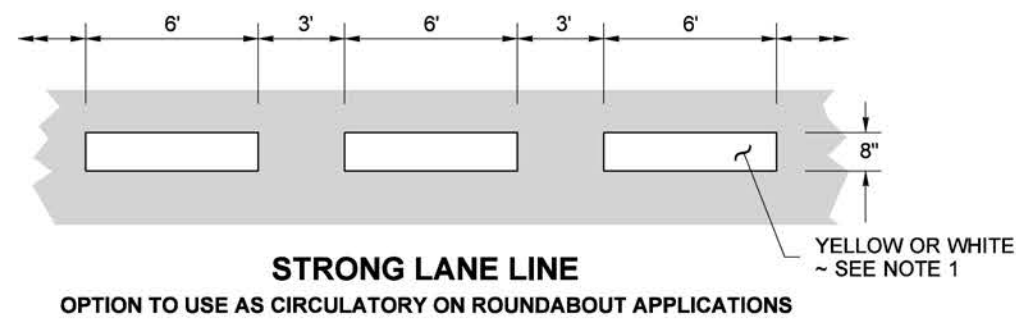
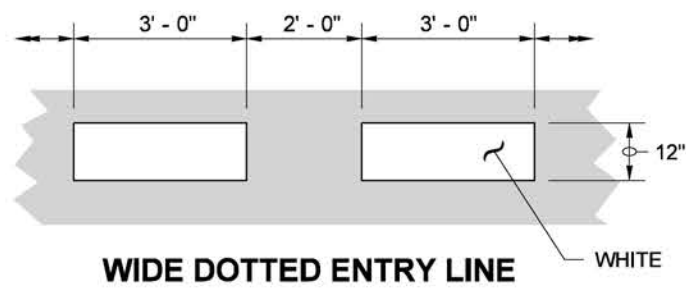
LONGITUDINAL MARKING PATTERNS
STANDARD PLAN M-20.10-03
SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION
Date: 2020.09.25 14:58:51
-07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation



DRAWN BY: FERN LIDDELL

Roundabout Specific Lines



Brian J. Walsh Walsh, Brian
Sep 23 2020 3:50 PM

LONGITUDINAL MARKING PATTERNS STANDARD PLAN M-20.10-03

SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION	
Date: 2020.09.25	14:59:30 -07'00'
STATE DESIGN ENGINEER	
Washington State Department of Transportation	

SECTION 32 17 26 – TACTILE WARNING SURFACING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section includes Specifications for furnishing and installing Cast In Place Replaceable Tactile Warning Surface Tiles (REP) with an in-line truncated dome pattern, embedded in all curb ramps and walking surfaces at the locations and to the dimensions shown on the Drawings, in accordance with the Contract Documents and as directed by the Engineer.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions and Division 1 Specifications, apply to this Section.
- B. Americans with Disabilities Act (ADA) Title 49 CFR Transportation, Part 37.9 Standards for Accessible Transportation Facilities, Appendix A, Section 4.29.2 Detectable Warnings on Walking Surfaces. FHA Memo (5-06-02) titled Truncated Domes. Federal Register Volume 71, No. 209, 49 CFR Part 37 (10-30-06), ADA Standards for Transportation Facilities (11-29-06, DOT): Sections 406, 705, and 810. ADA Standards for Accessible Design – 2010 (9/05/11, DOJ), ADAAG: Sections 705 and 810. Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Rights of Way (7/23/11, Access Board), PROWAG: Sections R208, R304, R305, R308, and R309.
- C. American Society for Testing and Materials (ASTM) Test Methods B117, C501, C1028, D543, D570, D638, D695, D790, G151, G155, and E84.
- D. American Association of State Highway and Transportation Officials (AASHTO): Test Method AASHTO-H20.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's literature describing products, installation procedures and maintenance instructions.
- B. Shop Drawings: Submit Standard Manufacturer Shop Drawings showing all pertinent characteristics of the composite Cast In Place Replaceable Tactile Warning Surface Tile (REP), including profile, sound on cane contact amplification feature and installation methods.
- C. Material Test Reports: Submit current test reports from qualified, accredited independent testing laboratory in accordance with ASTM guidelines and indicating that materials proposed for use are in compliance with specification requirements and meet the properties indicated. All test reports submitted shall be representative of the Cast In Place Replaceable Tactile Warning Surface Tile (REP) delivered to the Project.
- D. Maintenance Instructions: Submit copies of manufacturer's specified maintenance practices for each type of Tactile Warning Surface Tile and accessory.

1.4 QUALITY ASSURANCE

- A. Provide composite Cast In Place Replaceable Tactile Warning Surface Tiles (REP) as produced by a single manufacturer with a minimum of five years experience in manufacturing Cast In Place Replaceable Tactile Warning Surface Tiles (REP).
- B. Cast In Place Replaceable Tactile Warning Surface Tiles (REP) shall meet or exceed the following test criteria using the most current test methods:
 - 1. Compressive Strength: 28,900 psi minimum, when tested in accordance with ASTM D695.
 - 2. Flexural Strength: 29,300 psi minimum, when tested in accordance with ASTM D790.
 - 3. Water Absorption: Not to exceed 0.10%, when tested in accordance with ASTM D570.
 - 4. Slip Resistance: 1.05 minimum wet and 1.18 dry static coefficient of friction when tested in accordance with ASTM C1028.
 - 5. Flame Spread: 25 maximum, when tested in accordance with ASTM E84.
 - 6. Salt and Spray Performance of Tactile Warning Surface: No deterioration or other defects after 200 hours of exposure, when tested in accordance with ASTM-B117.
 - 7. Chemical Stain Resistance: No reaction to 1% hydrochloric acid, motor oil, calcium chloride, gum, soap solution, bleach, and antifreeze, when tested in accordance with ASTM D543.
 - 8. Abrasion Resistance: 500 minimum, when tested in accordance with ASTM C501.
 - 9. Accelerated Weathering of Tactile Warning Surface when tested by ASTM-G155 or ASTM G151 shall exhibit the following result: $\Delta E < 5.0$ at 2,000 hours minimum exposure.
 - 10. Tensile Strength: 11,000 psi minimum, when tested in accordance with ASTM D638.
 - 11. AASHTO-H20 Load Bearing Test: No Damage at 16,000# loading.
 - 12. Freeze/Thaw/Heat: No deterioration when tested in accordance with ASTM C 1026.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Cast In Place Replaceable Tactile Warning Surface Tiles (REP) shall be suitably packaged or crated to prevent damage in shipment or handling. Finished surfaces shall be protected by sturdy wrappings.
- B. Storage Facility

1. Store REP Tiles in an area that is within an acceptable temperature range (40-90 degrees). In particular, protect sealants from freezing.
2. Maintain Storage Facility in a clean dry condition to prevent contamination or damage to REP Tiles and incidentals.

1.6 GUARANTEE

- A. REP Tiles shall be guaranteed in writing for a period of five (5) years from date of Contract's final completion. The guarantee includes manufacturing defects, breakage, and deformation.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Composition: REP Tiles shall be manufactured using a matte finish exterior grade homogeneous (uniform color throughout thickness of product) glass and carbon reinforced polyester based Sheet Molding Compound (SMC) composite material. Truncated domes must contain fiberglass reinforcement within the truncated dome for superior structural integrity and impact resistance. A matte finish will be required on the Tactile Warning Surface for superior slip resistance performance superior to that offered by a gloss finish. Use of Tactile Warning Surface Products employing coatings or featuring layers of material with differing composition, performance, or color properties is expressly prohibited under this Section.
- B. Color: Color shall be homogeneous throughout REP Tile.
 1. Federal Yellow (Y) per Federal Standard 595B Table IV, Color No. 33538.
- C. Domes: Square grid pattern of raised truncated domes of 0.2" nominal height, base diameter of 0.9" and top diameter of 0.45". The Federal Code of Regulations permits a truncated dome spacing range of 1.6"-2.4." For superior wheelchair, walker and shopping cart mobility, the preferred truncated dome spacing shall have a center-to center (horizontally and vertically) spacing of 2.35", measured between the most adjacent domes on square grid.
- D. Configuration: REP Tile sizes shall be as indicated on the Contract Drawings. The REP Tiles shall feature a minimum of eight (8) embedded corrosion resistant 1 1/2" corrosion resistant concrete inserts with 1/2" x 1 1/2" heavy duty steel bolts and washers. Bolts must be covered with a structural water tight cap. Bolts must be located BETWEEN the truncated domes (in the field) for maximum protection of the Bolt integrity. Bolts are NOT to be located in the truncated dome.
 1. The field area shall consist of a non-slip textured surface with a minimum static coefficient of friction of 0.80, wet and dry.

2. At a minimum, REP Tile thickness shall measure ¼" nominal exclusive of the perimeter minimum 3/8" thick (nominal) by 1" wide flange. The body of the Tactile Warning Surface Tile must consist of a SOLID body for maximum strength and to eliminate the possibility of air entrapment and cracking.
- E. Radius REP Tile:
1. Radius REP Tile measures 24"x 33.25" and features reverse score lines on each 24" dimension for a 10', 15', and 20' radius condition. The Radius REP Tile out of the box measures 11' - 6" radius.
 2. Truncated domes feature proper dome alignment for a radius application. Radius REP Tile shall be cut to the appropriate configuration using the reverse score lines as a guide.
- F. Truncated Dome Surface of REP Tile shall be protected with factory installed plastic sheeting for cleanliness during the installation process. Basic Installation Guidelines shall be printed on the plastic sheeting in both English and Spanish for customer convenience.
- G. Dimensions: REP Tiles shall be held within the following dimensions and tolerances:
- H. Length and Width: as shown on the drawings
- I. Cleaning materials used on site shall have code acceptable low VOC solvent content and low flammability.
- J. The Specifications of the concrete, sealants and related materials shall be in accordance with the Contract Documents and the guidelines set by their respective manufacturers.

2.2 MANUFACTURERS

- A. Available manufacturers, subject to compliance with these Specifications include, but are not limited to, the following:
1. ADA Solutions Inc. of Chelmsford, MA (Phone: 800-372-0519, Fax: 978-262-9125, Web Site: www.adatile.com, E: info@adatile.com), or approved equal.
 2. Requests for Approved Equal Status must be submitted and approved by the Owner during the Bid Phase of the Project.

2.3 EQUIPMENT

- A. Contractor shall provide all tools, equipment and services required for satisfactory installation per manufacturer's instruction as Incidental Work. Equipment, which may be required includes typical mason's tools, a 2-foot long level with electronic slope readout, (2) 25-pound weights, and a rubber mallet with a piece of wood for tamping down the Tactile Warning Unit(s).

PART 3 - EXECUTION

3.1 PREPARATION

- A. During all concrete pouring and REP Tile Installation procedures, ensure adequate safety guidelines are in place and that they are in accordance with the applicable industry and government standards.
- B. The physical characteristics of the concrete shall be consistent with the Contract Specifications while maintaining a slump range of 4 - 7 to permit solid placement of the REP Tile. An overly wet mix will cause the REP Tile to float. Under these conditions suitable weights such as 2 concrete blocks or sandbags (25 pounds) shall be placed on each REP Tile.
- C. The concrete shall be poured and finished, true and smooth to the required dimensions and slope prior to REP Tile placement.

3.2 INSTALLATION

- A. Contractor will not be allowed to install Tactile Warning Surface Tiles until all submittals have been reviewed and approved by the Engineer.
- B. REP Tile shall be installed per manufacturer's instructions.
- C. To the maximum extent possible, the REP Tiles shall be oriented such that the rows of in-line truncated domes are parallel with the direction of the ramp. When multiple REP Tiles regardless of size are used, the truncated domes shall be aligned between the tactile warning surface tiles and throughout the entire tactile warning surface installation.
- D. In accordance with the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Rights of Way (7/23/11, Access Board): Sections 304 + 305), Tactile Warning Surface Tile shall be located relative to the curb line as shown within Sections 304+305 of the Guidelines.
- E. The REP Tiles shall be tamped or vibrated into the fresh concrete to ensure that there are no voids or air pockets, and the field level of the Tactile Warning Surface Tile is flush to the adjacent concrete surface or as the Drawings indicate to permit proper water drainage and eliminate tripping hazards between adjacent finishes.
- F. On Continuous Runs: The Installer shall leave a 1/8" nominal gap between successive Tactile Warning Surface Tiles. As part of the concrete finishing operation, the Installer shall apply 1/4" edge treatment around the perimeter of the Tactile Warning Surface Tiles such as Sikaflex 1a or BASF NP1 shall be applied to the edge treatment for a watertight Tactile Warning Surface Tile installation.

3.3 CLEANING AND PROTECTING

- A. Protect REP Tiles against damage during construction period to comply with REP Tiles manufacturer's Specifications.

- B. During and after the REP Tile installation and the concrete curing stage, it is imperative that there are no walking, leaning or external forces placed on the REP Tile to rock the REP Tile, causing a void between the underside of the REP Tile and the concrete substrate.
- C. Remove Protective Plastic Sheeting from REP Tile within 24 hours of installation of the REP Tile. Particularly under hot weather conditions (80 degrees or higher), plastic sheeting will adhere strongly (resulting in difficult removal of same) to Tactile Warning Surface Tile when not removed quickly.
- D. If requested by the Project Manager, clean REP Tiles not more than four (4) days prior to date scheduled for inspection intended to establish date of substantial completion in each area of project. Clean REP Tile by method specified by Tactile Warning Surface Products manufacturer.

END OF SECTION 32 17 26

SECTION 32 31 13 - CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. The Contractor shall provide chain link fencing and appurtenant Work, complete and operable.

1.2 SUBMITTALS

- A. Furnish submittals in accordance with Section 01 33 00 – Submittal Procedures.
- B. Shop drawings of fences and gates with all dimensions, details, and finishes. Drawings must include post foundations.
- C. Product Data: Manufacturer's catalog indicating materials and a letter certifying that all conditions of the specifications have been met.

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Chain link fencing and gates shall be products of a single manufacturer which has been successfully engaged in the production of such items for a period of at least 5 years.
- B. Installer's Qualifications: Installation of the chain link fence shall be by the manufacturer or by a firm accepted and licensed by the manufacturer.

PART 2 - MATERIALS

2.1 GENERAL

- A. All perimeter fencing and gates shall be 6 feet high. All materials and components shall be new, first quality items specifically manufactured for the intended application.

2.2 CHAIN LINK FENCE FABRIC

- A. Chain link fence fabric shall be made of steel wire helically wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling or twisting the ends of the wire to form the desired selvage of the fabric. The fabric shall be vinyl coated black.
- B. Fence fabric shall be No. 11 gauge steel wire, 2-inch mesh, with top selvages knuckled and bottom selvages twisted and barbed. Fabric shall be galvanized in conformance with ASTM A392, Class 1, with not less than 1.2 ounces zinc per square foot of coated surface.

2.3 STEEL FENCE FRAME MEMBERS

- A. Steel pipe produced in accordance with commercial standards. Minimum yield strength of 50,000 psi. Cold formed and welded per ASTM F1043 Group IC. Pipe sections to conform to ASTM A120, Schedule 40 standard weights.
- B. Pipe Section Size
 - 1. End and Corner Post 2-3/8" OD, 3.65 lb/ft
 - 2. Line 1.9" OD, 2.72 lb/ft
 - 3. Rail and Braces 1.66" OD, 2.27 lb/ft.
 - 4. Gate Post 6-5/8" OD

2.4 FITTINGS

- A. Chain link fence fittings per ASTM F 626. All ferrous metal fittings to be galvanized.
- B. Post caps: Steel, cast iron or aluminum alloy; must be weatherproof to prevent moisture intrusion into post. Top with arm to be provided when barbed wire is specified or intermediate or line post tops to have loop for top rail when only rail is specified.
- C. Rail ends: Formed steel or iron, designed to provide secure connection of top rails to terminal post and brace or other rails to terminal and intermediate posts.
- D. Sleeves: Lengths of top rails to be connected using 6" sleeves with a .055 minimum wall thickness that allow for expansion or contraction of the rail.
- E. Tie Wire: 9 gauge galvanized steel or aluminum for attachment of chain link fabric to rails. Hog rings attach fabric to tension wire to be 12-1/2 GA steel.
- F. Fabric bands and brace bands to be pressed steel.
- G. Tension (stretcher) bars to be made of one continuous piece of steel or aluminum, 3/16" x 3/4", in the same height as the fence. Provide one bar, per end or gate post and two bars per corner or pull post.
- H. Tension wire: Galvanized steel wire, 7 gauge core, having a tensile strength of 75,000 psi.
- I. Truss rods & tightened. Rod diameter 3/8".
- J. Nuts, bolts and screws shall be steel, minimum size 3/8-inch diameter, hot-dip galvanized after fabrication.
- K. Galvanized coating damaged during construction of the fencing shall be repaired by application of Galvo-Weld; Galvinox; or equal.

2.5 POST FOUNDATIONS

- A. Class of Concrete in accordance with Washington State Department of Transportation 2022 Standard Specifications Section 6-02.3(2).

PART 3 - EXECUTION

3.1 GENERAL

- A. Inspection: Prior to commencing installation, require Installer to inspect all areas and conditions within which Work of this Section will be performed. Dimensions and clearances shall be verified. Final grading shall be completed and all earth, brush, or other obstructions which interfere with the proper alignment and construction of fencing shall be removed.
- B. Unless otherwise indicated, all posts shall be set in concrete. Gate and related posts, corner posts, and other critical elements shall be provided with concrete foundations which are designed by an engineer to safely accommodate the loads to which they will be subjected.

3.2 INSTALLATION

- A. Excavation: Holes for posts shall be drilled or hand excavated to the diameters and spacing indicated on the plans, in firm, undisturbed or compacted soil. Post foundations shall comply with the following:
 - B. Holes shall be excavated to a diameter not less than 12-inches or not less than 5 times the largest dimension of the item being anchored, whichever is larger.
 - C. Depth for holes shall be not less than 40 inches.
 - D. Setting Posts: Line posts shall be spaced at not more than 10-foot intervals, measured from center to center of the posts, parallel to the ground slope. Posts shall be set plumb and shall be centered in holes, 4-inches above the bottom of the excavation, with posts extending not less than 36-inches below finish grade surface.
 - E. Corner posts shall be installed where changes in the fence lines equal or exceed 30 degrees, measured horizontally.
 - F. Each post shall be properly aligned vertically and its top aligned parallel to the ground slope. Posts shall be maintained in proper position during placement and finishing operations.
 - G. Concrete: Concrete for footings may be placed without forms, providing the ground is firm enough to permit excavation to neat line dimensions. Prior to placing concrete, the earth around the hole shall be thoroughly moistened.
 - H. Encasement concrete for footings shall be placed immediately after mixing in a manner such that there will be no concentration of the large aggregates. The concrete shall be consolidated by tamping or vibrating.

- I. Concrete footings shall have a neat appearance and shall be extended 2-inches above grade and troweled to a crown to shed water.
- J. A minimum of 7 days shall elapse after placing the concrete footings before the fence fabric is fastened to the posts.
- K. Bracing: Bracing shall be provided at all ends, corners, gates, and intermediate brace posts. Corner posts and intermediate brace posts shall be braced in both directions. Horizontal brace rails shall be set midway between the top rail and the ground, running from the corner, end, intermediate brace or gate post to the first line post. Diagonal tension members shall connect tautly between posts below horizontal braces.
- L. Braces shall be so installed that posts remain plumb when diagonal rod is under proper tension.
- M. Intermediate Brace Posts: Where straight runs of fencing exceed 500-feet, intermediate brace posts shall be installed, spaced equally between ends or corners; with additional posts provided as required, such that the spacing between intermediate brace posts does not exceed 500-feet. Intermediate brace posts shall be equivalent in size to corner posts and shall be braced with horizontal brace rails and diagonal tension members in both directions.
- N. Top Rails: Top rails shall be run continuously through post caps, bending to radius for curved runs. Expansion couplings shall be provided as recommended by the fencing manufacturer.
- O. Tension Wire: Continuous bottom tension wire shall be stretched tight with turnbuckles at end, gate, intermediate, and corner posts. Tension wire shall be installed on a straight grade between posts, with approximately 2-inches of space between finish grade and bottom selvage, unless otherwise indicated. Tension wire shall be tied to each post with not less than 6 gauge galvanized wire.
- P. Fabric: The chain-link fabric shall be fastened on the secured side of the posts. Fabric shall be stretched and securely fastened to posts. Between posts, top and bottom edges of the fabric shall be fastened to the top rail and bottom tension wire, respectively. Fabric shall be stretched and anchored in such a manner that it remains in tension after the pulling force is released.
- Q. Tie Wires: Tie wire shall be bent to conform to the diameter of the pipe to which it is attached, clasping pipe and fabric firmly with ends twisted at least two full turns. Ends of wire shall be bent back to minimize hazard to persons or clothing.
- R. Fabric shall be tied to line posts with tie wires spaced at 12-inches on center.
- S. Fabric shall be tied to rails and braces with tie wires spaced at 14-inches on center.
- T. Fabric shall be tied to tension wires, with hog rings spaced 18-inches on center.
- U. Stretcher Bars: Fabric shall be fastened to end, corner, intermediate brace, and gate posts with stretcher bars. Bars shall be threaded through or clamped to fabric at 4-inches on center and secured to posts with stretcher bar bands spaced no more than 14-inches on center.

- V. Fasteners: Nuts for tension bands and hardware bolts shall be installed on the side of fence opposite the fabric side. Ends of bolts shall be peened or the threads scored to prevent removal of nuts.

3.3 GROUNDING

- A. Fences crossed by power lines of 600 volts or more shall be grounded at or near the point of crossing and at distances not exceeding 150-feet on each side of the crossing.
- B. Fences, gates and appurtenances enclosing electrical equipment areas, gas yards, or other hazardous areas shall be electrically continuous and grounded.
- C. Ground conductor shall consist of No. 8 AWG solid copper wire. Grounding electrodes shall be 3/4-inch by 10-foot long copper-clad steel rod. Electrodes shall be driven into the earth so that the top of the electrode is at least 6-inches below grade.
 - 1. Where driving is impracticable, electrodes shall be buried a minimum of 12-inches deep and radially from the fence. Top of electrode shall be not less than 2-feet or more than 8-feet from the fence.
- D. Ground conductor shall be clamped to the fence and electrodes with bronze grounding clamps so as to create electrical continuity between fence posts, fence fabric, and ground rods. After installation, the total resistance of fence to ground shall not be greater than 25 ohms.

END OF SECTION 32 31 13

SECTION 328400 – PLANTING IRRIGATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes piping, valves, sprinklers, quick couplers, specialties, controls, valve boxes, and wiring for automatic-control irrigation system.

1.3 DEFINITIONS

- A. Circuit/Lateral Piping: Downstream from control valves to sprinklers, specialties, and drain valves. Piping is under pressure during flow.
- B. Irrigation Main Piping: Downstream from point of connection to water distribution piping to, and including, control valves. Piping is under water-distribution-system pressure.
- C. The following are industry abbreviations for plastic materials: The following are industry abbreviations for plastic materials:
 - ABS: Acrylonitrile-butadiene-styrene plastic.
 - FRP: Fiberglass-reinforced plastic.
 - PA: Polyamide (nylon) plastic.
 - PE: Polyethylene plastic.
 - PP: Polypropylene plastic
 - PTFE: Polytetrafluoroethylene plastic.
 - PVC: Polyvinyl chloride plastic.
 - TFE: Tetrafluoroethylene plastic.
- D. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control, signaling power-limited circuits.

1.4 PERFORMANCE REQUIREMENTS

- A. Location of Sprinklers and Specialties: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards. Maintain 100 percent water coverage of turf and planting areas indicated.

- B. Irrigation zone control shall be automatic operation with controller and automatic control valves.
- C. Contractor shall designate a project manager to be the sole source contact for coordinating the installation of this project with the Owner's representative.
- D. Contractor shall retain and protect and/or repair all existing irrigation systems so that they remain unchanged after project completion. Existing landscape areas which have been injured by the work shall be graded and restored to original conditions.
- E. Minimum Working Pressures: The following are minimum pressure requirements for piping, valves, and specialties, unless otherwise indicated:
 - 1. Irrigation Main Piping: 200 psig.
 - 2. Circuit Piping: 200 psig.
- F. Design shall be square or triangular spacing and head to head coverage.
- G. Areas to be irrigated: All planted areas adjacent to major buildings shall have automatic underground sprinkler systems. All new planting and turf is to be scheduled for irrigation unless specifically designed to thrive without supplementary watering.
- H. System shall be designed with balanced precipitation rates within each zone and zoned to accommodate the horticultural requirements of different plant material, wind, terrain, site exposure and slope. (i.e., lawn vs. shrub or ground cover, sloped vs. flat, and northern vs. southern exposure.)

1.5 SUBMITTALS

- A. Product Data: Include pressure ratings, rated capacities, and settings of selected models for the following:
 - 1. General-duty valves.
 - 2. Specialty valves.
 - 3. Automatic-control valves.
 - 4. Vaults
 - 5. Control-valve boxes.
 - 6. Sprinklers.
 - 7. Irrigation specialties.
 - 8. Controllers. Include wiring diagrams.
 - 9. Control cables. Include splice kits and conduit.
 - 10. Field quality-control test reports.
- B. The static line pressure at the point of connection to the existing irrigation mainline is assumed to be an adequate PSI. The contractor is responsible for verifying static, working pressure and flow with the Owners representative prior to installation of any new irrigation equipment. Contractor shall set all pressure

regulation values at the appropriate levels to ensure proper pressure for the type of head or drip components.

- C. Maintenance Schedule: Contractor shall provide a schedule of proposed maintenance for approval by the WSU Grounds Department. Maintenance schedule shall include, but not be limited to:
 - 1. Seasonal winterization and start-up of the system.
 - 2. Monitoring and adjusting automatic controller scheduling.
 - 3. Checking and adjusting elevation of valve boxes and irrigation heads.The Contractor shall continue to be responsible for maintaining all irrigation systems and equipment for a period of 120 days after Landscaping Substantial Completion.
- D. Project Record Drawings: Contractor shall record all changes made during construction which deviate from design documents. Contractor shall provide dimensioned as-built drawings for all equipment installed, to include actual locations (horizontal and vertical) of sleeves, control valves, and conduit wiring, at project completion.
- E. Operation and Maintenance Data: Contractor shall provide complete documentation of the delivered system to include three (3) sets of manufacturer's maintenance data sheets, replacement parts lists, equipment brochures and systems operations information bound in 3-ring binders and one CD or USB drive. Composite data sheets shall have the specific product used on the project clearly identified in colored ink marking.
- F. Controller Timing Schedule: Indicate timing settings for each automatic controller zone.

1.6 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. All material utilized in the work shall be new, of the latest make/model currently in production, and shall be of a type specifically manufactured for the use intended.
- C. Contractor shall provide products and system installation in accordance with all local, municipal, and state laws, rules and regulations governing or relating to any work in this section.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.

- B. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending.
- C. Stockpiling of materials and piping onsite is prohibited. Materials and piping brought to the project site shall be laid out and installed and shall not reach heights greater than 3 feet.

1.8 PROJECT CONDITIONS

- A. Interruption of Existing Water Service: Do not interrupt water service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water service according to requirements indicated:
 - 1. Notify Owner no fewer than 3 days in advance of proposed interruption of water service.
 - 2. Do not proceed with interruption of water service without Owner's written permission.

1.9 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
- B. Sprinkler Units: Equal to 10 percent of amount installed for each type and size indicated, but no fewer than 4 units.

PART 2 - PRODUCTS

2.1 PIPES, TUBES, AND FITTINGS

- A. All mainline change of direction fittings shall be reinforced with thrust blocks.
- B. Plastic pipe shall be rigid unplasticized PVC Schedule 40 as indicated on the drawings conforming to ASTM D-1784 and D-2241 standards specifications for PVC plastic pipe. The pipe shall be homogenous throughout and free from visible cracks, holes, foreign materials, blisters, deleterious, wrinkles, and dents.
 - 1. Laterals: PVC Schedule 40
 - 2. Main Lines: PVC Schedule 40
 - a. High-Density Polyethylene (HDPE) Shall not be used on mainlines.
- C. All pipe shall be continuously and permanently marked with the following information:
 - 1. Manufacturer's name or trademark, size, schedule and type of pipe, working pressure at 73 degrees F. and National Sanitation Foundation (NSF) approval.

- D. All plastic pipe fittings to be installed shall be molded fittings manufactured of the same material as the pipe and shall be suitable for solvent weld, slip joint ring tight seal, or screwed connections.
- E. When connection is plastic to metal, plastic female adapters shall be used. The female adapter shall be hand tightened, plus one turn with a strap wrench. Joint compound shall be Teflon Tape or Water Based Teflon Paste.
- F. Sleeves: All pipe and wire installed under any paved surface (roads, walks, paths, curbs, walls, stairs, etc.) shall be sleeved.
 - 1. Schedule 40 PVC, Minimum 6 inch diameter.
 - 2. Specify service line polyethylene pipe in sleeve runs greater than 20 feet.
- G. Swing Joints: All swing joints shall be Schedule 40, 90 degree street elbow (HDPE material) with Schedule 80 PVC nipples.
 - 1. Swing joints shall consist of the same size pipe as the inlet on the head.
 - 2. Swing joints shall be made with pipe standard length of 6 inches (+/- 2 inches depending on site conditions)
 - 3. All swing joints at end of line shall be installed on a PVC 90 degree slip thread Schedule 40 PVC elbow.

2.2 JOINING MATERIALS

- A. Glued fittings for circuit piping. Follow Manufacturer's instructions for cementing PVC pipe.
- B. Primer: Weld-On P-70 Primer
- C. Cement: Weld-On 711 PVC Solvent Cement, grey

2.3 VALVES

- A. Isolation Valves: Provide main line isolation valves to divide the main line into manageable segments. Select locations to isolate major branches of the system or individual athletic fields where possible.
- B. Valve- Auto Control:
 - 1. Globe Valve with pressure regulating module
 - 2. Acceptable Manufactures: Rain Bird model PEB.
- C. Curb Stop Ball Valves:
 - 1. Material: Bronze
 - 2. Acceptable Manufacturers: Meuler, Ford
- D. Check Valves
 - 1. Acceptable Manufactures: King Brothers
- E. Master Valves
 - 1. Acceptable Manufacture: Rain Bird EFA/EFB, Brass

2.4 SPECIALITY VALVES

- A. Quick-Coupling Valves: Schedule 40 galvanized steel, painted and wrapped.
 - 1. Rainbird 33D ¾ Inch.
 - 2. Quick couplers for system winterization shall not exceed 1-inch, Rainbird 44D.
- B. Hose Bibs: All hose bibs shall be brass, with 45 degree angle.
 - 1. Champion HB2M or approved equal.

2.5 VALVE BOXES

- A. Install no more than one valve per box.
- B. Valves boxes shall be set with top at grade in lawns and 1-inch above grad in shrub zones.
- C. Automatic valves between 1-2 inches:
 - 1. Install in Carson or Rainbird Valve Box, 11x17 inches.
- D. Automatic valves larger than 2 inches:
 - 1. Install a Jumbo Carson Valve Box, 14x21 inches.
- E. Install hose bibs and quick couplers in 10-inch round Carson Valve Boxes.
- F. Valve boxes to be green plastic w/bolt down lid (purple lid for non-potable water) for electric remote-control valves, quick coupling valves, gate valves, manual drain valves, and air release valves. For valve boxes located in paved areas: 'Brocks' #36-HMB concrete valve boxes with cast iron locking cover shall be used with non-potable water designation.

2.6 IRRIGATION HEADS

- A. Materials:
 - 1. Plastic
 - 2. Stainless Steel
- B. Provide additional spare heads for each model equal to 10 percent of the quantity to be installed.
- C. Pre-Approved Manufacturers:
 - 1. Sprayheads: Rain Bird 1800 (without SAM or PRS), Hunter
 - 2. Rotors and Rotary: Hunter
 - a. Hunter MP 3000 and Hunter MP 1000 Pros, PRS 40.

2.7 AUTOMATIC-CONTROL SYSTEM (2 – WIRE SYSTEM)

- A. Existing Controller: All controllers shall be Calsense ET2000e series with LR (internal local radio modem) and RRe (enhanced radio remote receiver board) components.
- B. Splicing Materials: Manufacturer's packaged kit consisting of insulating, spring-type connector or crimped joint and epoxy resin moisture seal; suitable for direct burial.
 - 1. 3M - model #DBY or approved equal.
- C. Enclosure
 - 1. The controller shall be housed in a factory pre-assembled, UL-listed weather proof, lockable, powder-coated steel enclosure (by Calsense) suitable for wall mounting or freestanding pedestal mounting.
 - 2. Wall mount: Specify stainless steel backboard (Calsense SSBP option); top of board shall be 6 feet above ground level.
 - 3. Pedestal mount: Specify 38 inch height with flip top to provide easy access for programming from a standing position under normal installations.
 - 4. Controller enclosure shall be mounted outdoors.
 - 5. Enclosure shall come complete with lighting and surge protection.
 - 6. All terminals shall be factory labeled.
 - 7. On/Off switch shall be provided to isolate controller along with GFI receptacle.
 - 8. Optional radio antenna premounted and connected on SSE-R enclosure shall be included.
 - 9. Ten year warranty on enclosure and Calsense installed equipment within shall be provided.
- D. Control Wire
 - 1. All control wire shall be copper, type UP, single strand, UL approved for 24-50 volts, rated for direct burial.
 - a. Lengths up to and including 1000 feet: #14
 - b. Length greater than 1000 feet: #12
 - 2. Insulation colors on control wires:
 - a. Positive: Red
 - b. Common: White
 - c. Spares: Orange
 - d. Flow Meter Wire: Red and Black
 - e. Master Valve Wire: Yellow
 - 3. Wire Splices
 - a. Splices shall be made with Spears DS-400 or approved equal.

PART 3 - EXECUTION

3.1 QUALIFICATIONS

- A. Irrigation Contractor/Installer shall be a company specializing in irrigation work, with a minimum 5 years of documented experience in irrigation installation of a similar nature.

3.2 INSTALLATION

- A. Layout
 - 1. Contractor shall advise Consultant and WSU Project Manager of any discrepancies between drawings and actual ground measurements prior to beginning installation.
 - 2. Contractor shall check correlation between heads and any trees, hydrants, signs, street lights, etc., and notify Project Representative of any potential conflicts.
- B. Preparation
 - 1. Set stakes to identify locations of proposed irrigation system. Obtain Landscape Architects or WSU project managers approval before excavation.

3.3 EARTHWORK

- A. Install warning tape directly above pressure piping, 12 inches below finished grades, except 6 inches below subgrade under pavement and slabs.
- B. Install piping and wiring in sleeves under sidewalks, roadways, parking lots, and railroads.
- C. Install piping sleeves by boring or jacking under existing paving if possible.
- D. Provide minimum cover over top of underground piping according to the following:
 - E. Boring locations – Mainline, 36 inches.
 - F. Irrigation Main Piping: 24 inches.
 - G. Circuit Piping: 18 inches.
 - H. Sleeves: 24 inches.

3.4 PREPARATION

- A. Set stakes to identify locations of proposed irrigation system. Obtain Landscape Architect's approval before excavation.

3.5 PIPING INSTALLATION

- A. PVC shall be snaked slightly in trench.
- B. Buried pipe depth
 - 1. Mainlines: 18 inches
 - 2. Circuit/Lateral Lines: 12 inches
- C. Design piping plans with 45 degree and 90 degree angles only.
- D. Bends in pipe shall not exceed 18 degrees in 20 feet. Install components having pressure rating equal to or greater than system operating pressure.
- E. Install no more than two lines per trench.
- F. When laying two lines in a trench, they shall be laid side by side and never stacked, with a minimum of 2-inches between lines.
- G. Install fittings at least 6-inches apart.
- H. Piping in control-valve boxes and above ground may be joined with flanges instead of joints indicated.
- I. Install piping free of sags and bends.
- J. Install groups of pipes parallel to each other spaced to permit valve servicing.
- K. Install fittings for changes in direction and branch connections.
- L. Lay piping on solid subbase, uniformly sloped without humps or depressions.

- M. Backfill pie trench with debris-free native soil.
- N. Swing joints shall not be installed until after pressure tests.
- O. Follow manufacturer's instructions for gluing of joints. Allow PVC joints to set up between gluing and application of water pressure per manufacturer's recommendations.
- P. Weld PVC pipe in temperatures following manufacture's recommendations.
- Q. Install PVC piping in dry weather when temperature is above 40 deg F 5 deg C. Allow joints to cure at least 24 hours at temperatures above 40 deg F 5 deg C before testing unless otherwise recommended by manufacturer.
- R. Fittings: Underground Piping: Union with plastic end of same material as plastic piping. Location and Arrangement: Drawings indicate schematic location and arrangement of piping systems. Install piping as indicated unless deviations are approved on Coordination Drawings.
- S. Sleeves: All pipe and wire installed under any paved surface (roads, Walks, paths, curbs, walls, stairs, etc.) shall be sleeved. All sleeve locations shall be marked on new concrete using WSU Facilities Services concrete stamp for Irrigation Sleeve. Stamp is available at no charge to the contractor for temporary use. Coordinate with WUS Construction Manager on WSU Grounds Staff.
 - 1. Schedule 40 PVC pipe, minimum 6" diameter.
 - 2. Specific service line polythylene pipe in sleeve runs greater than 20 feet.
 - 3. No glued fittings in a sleeve, only solid lines.

3.6 VALVE APPLICATIONS

- A. Underground, Shutoff-Duty Valves: Use the following:
 - a. NPS 3 and Smaller: Bronze ball valve.
 - b. NPS 4 and Larger: AWWA cast-iron resilient wedge gate valve with elastomeric gaskets and stem nut, valve box, and shutoff rod.
- B. Control Valves:
 - a. NPS 2 (DN 50) and Smaller: Plastic automatic control valve.

3.7 JOINT CONSTRUCTION

- A. Mainline piping shall be glued connections with solvent weld.
- B. Circuit piping shall be glued connections with solvent weld.
- C. Swing joint nipples and heads shall have screwed connections per detail.

3.8 VALVE INSTALLATION

- A. Underground Isolation and Quick Coupling Valves: Install in round valve box with top flush with grade.
- B. Control Valves: Install in control-valve box with top flush to grade.
- C. Isolation Valves: Shall be installed in vertical Schedule 40 PVC pipe (minimum 6-inch diameter) within a 10-inch round valve box.
- D. Check Valves: Provide check valves only on lateral lines for every 12 feet or elevation change.

- E. Shrub zones and lawn zones shall have separate valves.
- F. Each automatic valve shall be installed in a valve box.
- G. Automatic valves shall be installed in-line, with no valves closer than 24-inches apart.
- H. Provide unions on both sides of valves.

3.9 SPRINKLER INSTALLATION

- A. Flush circuit piping with full head of water and install sprinklers after hydrostatic test is completed.
- B. Locate part-circle sprinklers to maintain a minimum distance of 2 inches from walls, asphalt pavement and other boundaries, unless otherwise indicated.
- C. Maximum sprinkler head height shall be 6-inches.
- D. Sprinkler heads shall be installed on 3-way swing joints.
- E. Sprinkler heads shall be located no closer than 3-inches from walkway or curb.
- F. Use bottom inlet of sprinkler heads only.
- G. All heads next to sidewalk or curbs shall be $\frac{1}{2}$ -1 inch below level of walk or curb.
- H. All heads in the center of shrub beds shall be 1-1 $\frac{1}{2}$ inches above final grade.

3.10 AUTOMATIC-CONTROL SYSTEM INSTALLATION

- A. Install control cable in same trench as irrigation mainline piping beside piping. Provide conductors of size not smaller than recommended by controller manufacturer. Install cable in separate sleeve under paved areas if irrigation piping is installed in sleeve.

3.11 WIRING

- A. Contractor shall provide power to the controller locations.
- B. Provide one spare wire to each valve group manifold.
- C. No splices allowed in flowmeter wiring.
- D. No splices allowed in sleeves.
- E. Any splices shall be protected in a 10 inch round valve box.
- F. Control wire shall be installed in rigid PVC conduit from the base of the controller to one foot below grade. Flowmeter and master valve wire shall be installed in rigid 1 inch PVC conduit. All other control wire shall be direct buried.
- G. Lay wire in trenches under pipe.
- H. All buried wires shall be taped into bundles (taped ever 15 feet), except if installed in conduit or sleeve.
- I. Provide a coil of wire minimum 24 inches long at valve.

- J. Provide 24 inch expansion and contraction loop at ever valve box corner, and ever 100 feet of wire length in the trench.
- K. There shall be no splices in the wire in new systems except at valves Any spliced required occur to connect with existing systems must be first approved by the WSU Grounds Department.

3.12 LABELING AND IDENTIFYING

- A. Warning Tapes: Arrange for installation of continuous, underground, detectable warning tape over underground piping, during backfilling of trenches.

3.13 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust field-assembled components and equipment installation, including connections. Report results in writing.
- B. Perform the following field tests and inspections and prepare test reports:
- C. Pressure Test: Pressure testing shall be observed by the WSU construction Manager and WSU Grounds Staff as follows:
 - 1. Contractor shall notify WSU Construction Manager at least 24 hours prior to pressure testing.
 - 2. The contractor shall use test equipment in good condition and test equipment shall have no leaks at couplings which might compromise test procedure.
 - 3. After Zone valves are installed, pressure test main at 100 psi. System will pass when it maintains test pressure for the 30 minute test period.
 - 4. Any leaks will be corrected and the test will begin anew. The process will be complete when systems hold with no noticeable drop in pressure for 30 minutes.
 - 5. Lateral Lines: With lateral tees capped, pressure test by pumping system to 100 psi. The system testing will be accepted when it maintains 100 psi for 30 minutes with no noticeable drop in pressure.
 - 6. The test shall be performed with all fittings, valves, connections, couplings and all other connection points exposed until the completion and acceptance of the pressure test.
- D. Operational Test: After electrical circuitry has been energized, operate controllers and automatic control valves to confirm proper system operation.
- E. Flushing System: Flushing shall be observed by the WSU Construction Manager and WSU Grounds Staff as follows:
 - 1. All lines shall be flushed after swing joints are installed.
 - 2. After all new irrigation piping and risers are in place and connected, all necessary division work has been completed and prior to installation of irrigation heads, all control valves shall be opened and a full head of water used to flush out the system completely. Flush until water flows clear and no debris is caught in a fine mesh strainer placed over each of several outlets – including outlets at ends of lines.
 - 3. All heads shall be installed immediately after flushing.

- F. Water Coverage Test: Prior to seeding and sodding, ensure 100% coverage of all grass areas is met by system. Coverage testing shall be observed by the WSU Construction Managers and WSU Grounds Staff as follows:
 - 1. Contractor shall notify the WSU Construction Managers at least 24 hours prior to the performance of the Coverage Test.
 - 2. After system is 100 percent installed, a water coverage teste will be preformed to determine whether water coverage and operation of the system is adequate for planting, without areas of excessive overspray. If the WSU Construction Manager determines the system inadequate due to poor workmanship or materials, it shall be rejected or repaired at the Contractor's expense and both pressure and coverage tests repeated until accepted.

3.14 STARTUP SERVICE

- A. Verify that controllers are installed and connected according to the Contract Documents.
- B. Verify that electrical wiring installation complies with manufacturer's submittal and installation requirements in Division 16 Sections.
- C. Complete startup checks according to manufacturer's written instructions.
- D. Coordinate start-up with the owner.

3.15 ADJUSTING

- A. Adjust settings of controller.
- B. Adjust automatic control valves to provide flow rate of rated operating pressure required for each sprinkler circuit.
- C. Adjust sprinklers so they will be flush with finish grade.

3.16 WINTERIZATION

- A. Design and install ¾" inch or 1 inch quick couplers to enable system "blow out."
- B. Provide manual drain valves at all major low points in the system. When feasible, connect to the storm drainage system.

3.17 CLEAN-UP

- A. Area shall be kept reasonably free of debris at all times.
- B. Contractor shall remove from the project site all rubbish and debris resulting from this contract work, leaving site in a safe and clean condition on a day-to-day basis.
- C. Upon completion, all debris and excess materials shall be removed and all walks and roadways shall be swept and washed. Contract shall ensure sediments are not carried into the storm drain system.

3.18 RECORD DRAWINGS AND DELIVERIES

- A. Record accurately on one set of reproducible copies of the site plan provided by the Landscape Architect, all installed work including both pressure and non-pressure lines. Upon completion of each increment of work, transfer all such information and dimensions to the print. The dimensions shall be recorded in a legible and workmanlike manner.
- B. Dimension from two permanent points of reference (buildings, monuments, sidewalks, curbs, pavement, etc.) Locations shown on as-built drawings shall be kept day to day as the project is being installed. All dimensions noted on drawings shall be 1/8 inch in size (minimum).
- C. Show locations and depths of the following items:
 - 1. Point of connection
 - 2. Routing of sprinkler pressure lines (dimension maximum 100 feet along routing)
 - 1. Quick coupling valves
 - 2. Routing of control wires
 - 3. Other related equipment
- D. Maintain as-built drawings on site at all times.
- B. Make all notes on drawings in pencil (no ink pen).
- C. Contractor shall preserve a set of approved contract drawings on which is to be placed exact measured dimensions of line runs, tee, valves, sprinkler locations, gate valves, wire runs. This work must be done daily. **Requests for partial payments will not be honored without proof that these as-built drawings are totally up to date.** All buried work shall be located by accurate measurements from at least two permanent structures.
- D. Upon substantial completion of the project, the Contractor shall submit the drawings to the Landscape Architect, for review and approval. Upon approval, the Contractor shall prepare a set of 'as-built' reproducibles on which all the information is clearly shown, with drafting and legibility comparable to original drawings. The Owner's Representative will be the sole judge of the acceptability of the drawings. The receipt and approval of these documents is prerequisite to Final Payment.
- E. Surrender to Landscape Architect 'as-built' record drawings in AUTOCAD V13 and one paper hard copy prior to final inspection.
- F. Contractor to provide (2) 11 x 17 colored coded and laminated drawings delineating irrigation zones placed next to irrigation controller.
- G. Provide two (2) Quick Couple Valve Keys with hose swivel for installed Quick Couplers.

3.19 120 DAY MAINTENCE PERIOD

- A. The contractor shall continue to be responsible for maintaining all irrigation systems and equipment for a period of 120 days after Landscaping Substantial Completion.
- B. The Contractor shall supply all labor, supervision, materials, and equipment to meet all specifications during this period. After completion of the maintenance period, the Contractor shall turn over management of the site to the WSU Grounds, using a written agreement coordinated through the WSU CM.

3.20 WARRANTY PERFORMANCE

- A. The entire irrigation and water system shall be guaranteed/warranted to give satisfactory service for a period of one year from date of acceptance by the Owner.
- B. Throughout the one-year Landscape Warranty Period, the contractor shall monitor and maintain the new irrigation system in an operational and water efficient condition. Contractor shall ensure balanced irrigation rates, no excessively wet or dry areas, and properly functioning equipment including controller, backflow preventions, valves, heads and drip lines.
- C. Should any trouble develop within the time specified above due to inferior or faulty materials or workmanship, the trouble shall be corrected by the Contractor at no expense to the Owner.

END OF SECTION 328400

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Sodding.
 - 2. Hydroseeding.

1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- C. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- D. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 329113 "Soil Preparation" and drawing designations for planting soils.
- E. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For landscape Installer.
- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
 - 1. Certification of each seed mixture for turfgrass sod. Include identification of source and name and telephone number of supplier.
- C. Product Certificates: For fertilizers, from manufacturer.
- D. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Recommended procedures to be established by Owner for maintenance of turf during a calendar year. Submit before expiration of required maintenance periods.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful turf establishment.
 - 1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare Network or the American Nursery and Landscape Association.
 - 2. Experience: Five years' experience in turf installation in addition to requirements in Section 014500 "Quality Control."
 - 3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
 - 4. Personnel Certifications: Installer's field supervisor shall have certification in one of the following categories from the Professional Landcare Network:
 - a. Landscape Industry Certified Technician - Exterior.
 - b. Landscape Industry Certified Lawncare Manager.
 - c. Landscape Industry Certified Lawncare Technician.
 - 5. Pesticide Applicator: State licensed, commercial.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod

Transplanting and Installation" sections in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk materials with appropriate certificates.

1.9 FIELD CONDITIONS

A. Planting Restrictions: Plant during the following period. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of Substantial Completion.

1. Summer Planting: Between March 15th and July 1 or between August 31st and October 31st.
2. Immediately start maintenance after planting to allow a minimum of 3 weeks for grass to nit into topsoil prior to owner use.

B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 SEED

A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.

B. Seed Species: Shall be as follows or approved equal.

1. Seeded Turfgrass Lawns – Blue Supreme Lawn Mix manufactured by Clearwater Seed. Ph: (509) 835-4967. Seeding Rate 7 lbs per 1,000 sq. ft.
 - a. 80% Kentucky Bluegrass blend (Midnight, Rockstar, and Wildhorse Kentucky bluegrasses)
 - b. 20% Perennial Ryegrass blend
2. Dryland Grass – Hardy Low Maintenance manufactured by Clearwater Seed. Ph: (509) 835-4967. Seeding rate: 2 lbs per 1,000 sq. ft.
 - a. 30% Hard Fescue
 - b. 30% Sheeop Fescue
 - c. 30% Reclamation bluegrass
 - d. 10% Creeping Red Fescue

2.2 TURFGRASS SOD

- A. Turfgrass Sod: Approved complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture that is strongly rooted and capable of vigorous growth and development when planted.
- B. Turfgrass Species: Kentucky Bluegrass/Perennial ryegrass sod blend
- C. Turfgrass Species: Sod of grass species as follows, with not less than 85 percent germination, not less than 95 percent pure seed, and not more than 0.5 percent weed seed.

2.3 FERTILIZERS

- A. Fertilizer to be spread on areas to be sodded/seeded shall be commercially prepared and shall contain the following percentages/ ratios:

Sod Grass:

- 1. Starter Fertilizer: 10 lbs of fertilizer per 1,000 sq. ft.
 - a. 12% nitrogen
 - b. 15% phosphoric acid
 - c. 14% potash
 - d. 10% sulfur
 - 2. Establishment Fertilizer: Ratio per 1,000 sq. ft.
 - a. 1.5 lbs slow release nitrogen
 - b. 1.0 lbs phosphorus
 - c. 0.5 lbs potassium
- B. Commercial fertilizer shall be complete, uniform in composition, dry and free flowing. The fertilizer shall be delivered to the site in the original waterproof containers, each bearing the manufacturer's statement of analysis.
- C. Special Protection: If stored at the site, protect fertilizer from the elements at all times.

2.4 MULCHES

- A. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic and free of plant-growth or germination inhibitors; with a maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.
- B. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application; nontoxic and free of plant-growth or germination inhibitors.

- C. Asphalt Emulsion: ASTM D977, Grade SS-1; nontoxic and free of plant-growth or germination inhibitors.

2.5 PESTICIDES

- A. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
- C. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

2.6 PESTICIDES

- A. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
- C. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 3. Uniformly moisten excessively dry soil that is not workable or which is dusty.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

3.2 PREPARATION

- A. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

- 1. Protect grade stakes set by others until directed to remove them.

3.3 TURF AREA PREPARATION

- A. General: Prepare planting area for soil placement and mix planting soil according to Section 329113 "Soil Preparation.
- B. Placing Planting Soil: Place and mix planting soil in place over exposed subgrade.
- C. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- D. Before planting, obtain Landscape Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 HYDROSEEDING

- A. Hydroseeding: Mix specified seed, Commercial fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
 - 1. Mix slurry with nonasphaltic tackifier.
 - 2. Spray-apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than 1500-lb/acre dry weight, and seed component is deposited at not less than the specified seed-sowing rate.
 - 3. Spray-apply slurry uniformly to all areas to be seeded in a two-step process. Apply first slurry coat at a rate so that mulch component is deposited at not less than 500-lb/acre dry weight, and seed component is deposited at not less than the specified seed-sowing rate. Apply slurry cover coat of fiber mulch (hydromulching) at a rate of 1000 lb/acre.

3.5 SODDING

- A. Lay sod within 24 hours of harvesting unless a suitable preservation method is accepted by Landscape Architect prior to delivery time. Do not lay sod if dormant or if ground is frozen or muddy.

- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to soil or sod during installation. Tamp and roll lightly to ensure contact with soil, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
- C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

3.6 TURF MAINTENANCE

- A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
 - 1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
 - 2. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
- B. Watering: Install and maintain turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches (100 mm).
 - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
 - 2. Water turf with fine spray at a minimum rate of 1 inch (25 mm) per week unless rainfall precipitation is adequate.
- C. Contractor to verify grass is has properly nit into topsoil prior to owner use to prevent potential damage to the sod.
- D. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass height. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
 - 1. Mow turf to a height of 1-1/2 to 2 inches (38 to 50 mm).
- E. Turf Postfertilization: Apply commercial fertilizer after initial mowing and when grass is dry.

1. Use fertilizer that provides actual nitrogen of at least 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) to turf area.

3.7 SATISFACTORY TURF

- A. Turf installations shall meet the following criteria as determined by Landscape Architect:

1. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.

- B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

3.8 PESTICIDE APPLICATION

- A. Apply pesticides and other chemical products and biological control agents according to requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- B. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.9 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.
- C. Erect temporary warning signs as required to protect newly planted areas from traffic.

3.10 MAINTENANCE SERVICE

- A. Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in "Turf Maintenance" Article. Begin maintenance immediately after area is planted and continue until acceptable turf is established, but for not less than the following periods:
 1. Turf: 60 days from date of Substantial Completion.

END OF SECTION 329200

SECTION 329300 – PLANTS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. Extent of work is shown on drawings.
- B. The work of this section consists of furnishing all plants, labor, equipment, and performing all operations in connection with planting of all trees and mulching of beds. Topsoil in beds shall have been provided and rough graded prior to this portion of the contract.

1.3 QUALITY ASSURANCE

- A. Qualification of Workmen: Provide at least one person who shall be present at all times during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and the best methods for their installation and who shall direct all work performed under this section.
- B. Standards: All plants and planting material shall meet or exceed the specifications of federal, state, and county laws requiring inspection for plant disease and insect control.
- C. Quality and size shall conform to the current edition of "Horticultural Standards" for number one grade nursery stock as adopted by the American Association of Nurserymen's Standard Specifications.
- D. All plants shall be true to name and one of each bundle or lot shall be tagged with the name and size of the plants in accordance with the standards of practice of the American Association of Nurserymen's Standard Specifications. In all cases, botanical names shall take precedence over common names.

1.4 SUBMITTALS

- A. Materials List: Before any planting materials are delivered to the job site, submit to the Landscape Architect a complete list of all plants and other items proposed to be installed. Include complete data on source, size, and quality.
- B. Mulch: One (1) gallon zip-lock bag with mulch sample.

- C. Demonstrate complete conformance with the requirements of this section. This shall in no way be construed as permitting substitution for specific items described in the plans or these Specifications unless the substitution has been approved in advance in writing by the Landscape Architect.
- D. As-Built Drawings: During the course of the installation, carefully record in red line on a print of the planting plans all changes made to the planting system layout during installation. Autocad drawings, and paper form hardcopies shall be turned in as part of project closeout.
- E. Certificates: All certificates required by law shall accompany shipments. Upon completion of the installation, deliver all certificates to the Landscape Architect.

1.5 PRODUCT HANDLING

- A. Delivery and Storage: Deliver all items to the site in their original containers with all labels intact and legible at time of Landscape Architect's inspection. Landscape Architect shall receive 48 hours minimum notice for plant material inspection.
- B. Immediately remove from the site all plants which are not true to name and all materials which do not comply with the provisions of this section of these Specifications.
- C. Use all means necessary to protect plant materials before, during and after installation and to protect the installed work and materials of all other trades.

1.6 INSPECTION

- A. Requirements for Verification: The Contractor will inform the Landscape Architect to provide for inspection of operation. Landscape Architect shall receive 48 hours minimum notice prior to all inspections.
- B. The Contractor will notify the Landscape Architect as each operation is completed and request inspection and approval prior to initiating any additional work.

PART 2 - MATERIALS

2.1 PLANT MATERIALS – GENERAL

- A. Plant materials shall mean trees and plants of all descriptions required to be furnished for the project, in accordance with the plans and specifications. All plant material must be true to name, which shall conform to Standardized Plant Names of the American Joint Committee on Horticultural Nomenclature, and shall be legibly tagged with the name and size of the material according to the

general nursery practice as recommended by the American Association of Nurserymen's Standard Specifications.

- B. All plants shall be first-class representatives of their normal species or varieties. Unless otherwise specified, plants shall have average or normally developed branch systems and vigorous root systems. Plants shall be free from scale, disfiguring knots, sunscald injuries, abrasions of the bark, or other objectionable blemishes. Weak plants will not be accepted. Plants must show appearance of normal health and vigor in strict accordance with these Specifications. All stock shall be nursery grown.
- C. All plant material shall comply with state and federal laws with respect to inspection for plant disease and infection. Any inspection certificates required by law shall accompany each shipment, invoice, or order of stock.
- D. All plant material is subject to Landscape Architect's approval and inspection at any place, before during and/or after planting. Any plant material not approved by the Landscape Architect shall be immediately removed from the site.
- E. No plant material shall be accepted with loose or broken balls.

2.2 LANDSCAPE MATERIALS

- A. Mulch: Mulch shall be dark bark fines topdressing installed to a minimum depth of 3".
- B. Planter Edging/Mowstrip: Mowstrip shall be shovel cut edge to match existing.
- C. Compost: Eko Compost or approved equal.

D. PLANTING MIXTURE

- E. Planting Mix: All landscaped bed/planter areas are to receive import topsoil planting mix prior to planting. Planting mix shall consist of 3 parts existing topsoil mixed with one part Compost. If contractor determines there is insufficient existing topsoil, then import sandy loam shall be used. General contractor shall place planting mix to finish grades. Contractor to confirm topsoil depths prior to planting.
- F. All imported topsoil shall be a fertile, friable, natural loam soil, representative of productive soils in the vicinity. Topsoil is usually dark in color. It shall be obtained from well-drained areas, free from admixtures of subsoil, clay lumps, brush, weeds and other foreign matter, and free of roots, stumps, stones larger than 1.5 inches in any dimension; and free of other extraneous or toxic matter harmful to plant growth and be a hindrance to grading, planting, an maintenance operations. Topsoil should be obtained from local sources. It should have an acidity range (pH) of 5.5 - 7.5 , and an organic matter content between 2% and 8%. Sandy Loam topsoil must have 0% to 20% clay, 25% to 50% silt, and more than 50%

sand particles. Not more than 15 of topsoil weight can be gravel or stones. Soil particle size categories: Clay - 0.002 millimeters and smaller, Silt - 0.002 to .02 mm, Sand - 0.02 to 0.2 mm.

- G. The above mixture shall have biostimulant added to it at the following rates:
 - 1. Ground Cover Beds: 'Roots' dry formula at 2 lbs/100 sf as manufactured by Roots, Inc., 25 Science Park, New Haven, Connecticut 06511 (203) 786-5295.
 - 2. Tree and Shrub Planting: 'Roots' dry formula at 3 lb. per 2" inch caliber on trees and 1/4 lb. for 1 gallon shrub and 1 lb for 5 gallon shrub. Follow manufactures direction for applying. Manufactured by Roots, Inc., 25 Science Park, New Haven, Connecticut 06511 (203) 786-5295.
- H. Fill soil: Fill soil for placement in planting beds below the topsoil layer shall be natural friable loam free of lumps, roots, stumps, stones larger than 3" in any direction or other trash and debris such as concrete chunks or concrete spillage along the edge of any formwork. It shall not contain more than 10% by weight of gravel and/or stones less than 1.5 inches in any dimension. it must not contain toxic matter harmful to plant growth. It must have an acidity range (pH) within 5.6 to 7.5 and a particle size distribution as required for topsoil. In most instances, soil excavated from a construction site may be used for fill soil going back into the construction site.

PART 3 - WORKMANSHIP

3.1 SURFACE CONDITIONS

- A. Inspection: Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that planting may be completed in accordance with the original design and the referenced standards.
- C. Discrepancies: In the event of discrepancy, immediately notify the Landscape Architect.
- D. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.2 PLANTING – GENERAL

- A. Plant nursery stock immediately upon delivery to the site and approval of the Landscape Architect, except that, if this is not feasible, heal-in all balled material with damp soil and protect from sun and wind.
- B. Regularly water all nursery stock in containers, and place them in a cool area protected from sun and drying winds.
- C. Excavation of Plant Holes: Tree pits shall be as shown on detail drawing.

- D. Trees shall be supplied in sizes shown on the planting plan with all plants balled and burlapped.
- E. During planting operations, the nursery stock shall not be exposed to the sun, drying winds, or winter freezing.
- F. The soil in the bottom of the hole, which has been excavated to the prescribed requirements, shall be loosened to a depth of 3 inches and mixed with an equal amount of planting mix. A mound of soil shall be formed in the center of the hole to support the roots of the plant. The plant shall be placed on the mound of soil and held in a vertical position. The plant shall be so set, by adjusting the elevation of the mound that after settlement the plant will stand at approximately two inches above finish grade. The plant hole shall be backfilled with planting mix and placed in layers around the roots. Each layer shall be carefully tamped in place in a manner to avoid injury to the tree or disturbing the position of the plant. When approximately two-thirds of the plant hole has been backfilled, the hole shall be filled with water and the soil allowed to settle around the roots. After the water has been absorbed, the plant hole shall be filled with planting mix and tamped lightly to grade as shown on detail drawing.
- G. In the case of planting in the open on hot days, shorten the time between planting and watering.

3.3 MULCHING

- A. Apply mulch to a depth of 3", evenly spread over the entire area of each tree basin, shrub or ground cover bed as required.

3.4 PRUNING

- A. General: Each tree shall be pruned in accordance with standard horticultural practice to preserve natural character of plant. Pruning shall be done with clean, sharp tools.
- B. Pruning: The brushed or broken parts of large or fleshy roots shall be cut off smooth before planting. The only pruning to be done shall consist of removing dead, damaged, or crossing limbs so that the plant retains its natural form. All cuts shall be made flush with the collar on the trunk or branch as indicated by the International Society of Arboriculture pruning standards.
- C. Trees that have been so badly pruned as to spoil their form and usefulness shall be removed and replaced as interpreted by the Landscape Architect.

3.5 INSPECTION

- A. In addition to the normal progress inspections, schedule and conduct the following formal inspections, giving the Landscape Architect at least 48 hours prior notice of readiness for inspection.

- B. Inspection of prototype section of planting, prior to proceeding with installation of landscape materials and plants throughout site.
- C. Final inspection after completion of planting. Schedule this inspection sufficiently in advance, and in cooperation with Landscape Architect/Owner so that final inspection may be conducted within 24 hours after completion of planting.
- D. One year walk through inspection at the end of the maintenance period, provided that all previous deficiencies have been corrected.

3.6 GUARANTEE

- A. The Contractor shall guarantee all plant material to be true to botanical name, specified size and in a vigorous condition for a period of 1 year after job is accepted. The Contractor shall replace any plant materials that are dead and that are in the opinion of the Owner/Landscape Architect, in an unhealthy or unsightly condition, or that have lost their natural shape due to dead branches, excessive pruning or inadequate or improper maintenance. All plant materials rejected by the Owner/Landscape Architect shall be removed and replaced at no cost to the Owner. Only one replacement of any plant is required after Provisional Acceptance.
- B. Replacement plants and planting operations shall be in accordance with the original specifications. All costs for such replacements shall be considered to be included in the bid price. Replacement planting shall be completed no later than the next succeeding planting season. All areas damaged by replacement operations shall be fully restored by the Contractor to their original and/or specified conditions.

END OF SECTION



**Washington State
Department of Transportation**

General Permit (Application and Permit)

Applicant (hereinafter referred to as Permit Holder)				Permit Number GP	
Address				State Route	
City	State	Zip Code	Begin Milepost (if applicable) Left Right		End Milepost (if applicable) Left Right
Phone Number		FED ID/SWV #		Region	
Email				County	
Project Name (if applicable)					
Public Land Survey System (PLSS)					
At or begins at _____ 1/4 of the _____ 1/4 of Section _____ Township _____ N, Range _____ E W					
and if applicable ends at _____ 1/4 of the _____ 1/4 of Section _____ Township _____ N, Range _____ E W					
This General Permit shall apply to all Work being constructed by the permit on WSDOT right-of-way that is owned by or under WSDOT jurisdiction and includes all Work that will be WSDOT's responsibility to maintain when the Work is completed and accepted by WSDOT. (RCW 47.24.020 City Streets as part of State Highways.)					
Intended Use of WSDOT Highway Right-of-Way (hereinafter referred to as the "Work"):					
The Washington State Department of Transportation hereinafter will be referred to as "WSDOT." WSDOT will allow the Permit Holder to construct, upgrade, use, and/or maintain the Work described above provided the Permit Holder accepts all the terms, provisions, and exhibits attached hereto and by this reference made a part of this permit.					
Exhibit "A": General Permit Special Provisions			Exhibit "E":		
Exhibit "B": Right of Way Sheet and/or Vicinity Map			Exhibit "F":		
Exhibit "C":					
Exhibit "D":					
By signing below the Permit Holder accepts all the terms, provision, and exhibits attached to and made a part of this permit.					
Permit Holder			WSDOT Approval		
Print Name			Print Name		
Print Title			Print Title		
Signature			Signature		
Date			Date		
			Expiration Date		

General Provisions

No changes to these General Provisions may be made without further approval of the Office of the Attorney General

DOCUMENTS, NON-EXCLUSIVE, COMPLIANCE WITH LAW, WORK

1. A copy of this Permit must be on the job site, protected from the elements, at all times during any Permit Holder activity, construction or improvement Work as authorized by this Permit. "Work" under this Permit shall include the use of WSDOT-owned right-of-way as authorized herein.
2. The Permit Holder shall be responsible for compliance with all applicable federal, state, tribal and local laws, ordinances and regulations, that affect work being performed pursuant to this Permit. The Permit Holder shall defend and indemnify WSDOT and the State of Washington against any claims that may arise because the Permit Holder (or any of its employees or subcontractors) violated a legal requirement.
3. The Permit Holder agrees that all Work shall be performed and completed to the satisfaction of WSDOT. All material and workmanship shall conform, in the sole discretion of WSDOT, to WSDOT's Standard Specifications for Road, Bridge, and Municipal Construction, current edition and amendments thereto, unless WSDOT has agreed in writing to a different standard, and shall be subject to WSDOT inspection. All WSDOT inspections of Work within WSDOT-owned highway right-of-way or upon state highway right-of-way under WSDOT jurisdiction, are solely for the benefit of WSDOT and not for the benefit of the Permit Holder, Permit Holder's contractor (if any), or any third party.
4. Upon approval of this Permit, the Permit Holder agrees to and shall diligently proceed with the Work and comply with all of the terms, provisions, and exhibits attached herein. Unless specified otherwise by WSDOT, or agreed to in writing by WSDOT, the work authorized by this Permit shall begin, be completed, or shall expire by the dates as agreed to by this Permit and its provisions, as indicated on page 1.

RIGHT OF ENTRY NON-EXCLUSIVE

5. Subject to the terms of this Permit, WSDOT hereby grants to the Permit Holder, its authorized agents, contractors, subcontractors, and employees, a right of entry upon WSDOT-owned highway right-of-way or upon state highway right-of-way under WSDOT jurisdiction, onto which access is necessary to construct, operate and/or maintain the completed Work.

If WSDOT has approved any limited access breaks, or inner corridor access breaks, for the Work, the Permit Holder shall strictly comply with the terms and conditions of such approval.

WSDOT NOTIFICATION: SURVEY MONUMENTS, HIGHWAY SIGNS, FENCES, LANDSCAPING

6. Unless authorized by WSDOT or other affected property owner in writing, the Permit Holder shall assure that all public and private property, including but not limited to traffic signal equipment, signs, guide markers, lane markers, fences, mailboxes, guardrail, barriers, and utilities, are not impacted, damaged, destroyed, or removed. If any such property is damaged, destroyed, or removed without prior written authorization, the Permit Holder shall notify WSDOT's representative immediately of such impact, damage, destruction or removal. The Permit Holder shall replace, repair, or fully restore any private or public property that is damaged, destroyed, or removed to WSDOT's sole satisfaction.
7. The Permit Holder shall not disturb, remove, or destroy any existing Survey Monument before first obtaining a Washington State Department of Natural Resources (DNR) permit. The Permit Holder agrees that resetting Survey Monuments shall be the sole responsibility, and at the sole expense, of the Permit Holder. Such resetting of any Survey Monument shall be performed by or under the direct supervision of a Licensed Professional Land Surveyor. The Permit Holder shall notify WSDOT in writing within ten (10) calendar days of any Survey Monument that has been disturbed, removed, destroyed, or reset, and shall restore the Survey Monument to its original place and condition at the Permit Holder's sole expense within ten (10) calendar days of its disturbance, damage or destruction.

If Permit holder does not perform the resetting work as required herein, WSDOT may perform such work and the Permit Holder agrees to fully reimburse and make payment to WSDOT within thirty (30) calendar days of the date of WSDOT's detailed invoice pursuant to Section 26 – Invoice and Payments, herein. If WSDOT chooses not to make the repairs, WSDOT may initiate an action to revoke this Permit.

A listing of Survey Monuments can be found at the WSDOT's Geographic Services Office Website:

<http://www.wsdot.wa.gov/monument/searchBroad.aspx>

DISTURBANCE OF EXISTING RIGHT-OF-WAY VEGETATION

8. Unless otherwise authorized by WSDOT's representative in writing prior to the start of any Work, this Permit does not authorize the Permit Holder, its' employees, contractors, or agents, any right to cut, spray, retard, remove, destroy, disfigure, or in any way modify the physical condition of any vegetative or landscaping material located on WSDOT owned highway right-of-way or upon state highway right-of-way under WSDOT jurisdiction. Should the Permit Holder anticipate that its' Work will alter the appearance of WSDOT-owned highway right-of-way vegetation or landscaping material, the Permit Holder shall notify the WSDOT representative listed in Special Provision 1 to obtain WSDOT's prior written approval of the Permit Holder's proposed Work. If WSDOT allows the Permit Holder to modify WSDOT-owned highway right-of-way vegetation, it agrees that any vegetation cutting and/or trimming activities shall be conducted in such a manner that WSDOT-owned highway right-of-way vegetation and landscaping material appearance or functionality will not be altered or damaged. Should the Permit Holder alter or damage the appearance of WSDOT-owned highway right-of-way vegetation and landscaping without WSDOT's prior written approval, the Permit Holder is subject to penalties provided for in RCW's 47.40.070, 47.40.080, and 4.24.630, as applicable.

REMOVAL OF TIMBER

9. This Permit is issued pursuant to the applicable terms of RCW 47.12.140 (Severance and Sale of Timber and other personalty - Removal of nonmarketable materials). This Permit does not authorize the Permit Holder, its' employees, contractors, or agents, any right to cut or remove any trees or timber located on WSDOT right-of-way or upon state highway right-of-way under WSDOT jurisdiction without prior written approval from WSDOT.

MERCHANDISING

10. It is unlawful for any person to build, erect, establish, operate, maintain, or conduct along and upon the right-of-way of any state highway any platform, box, stand, or any other temporary or permanent device or structure used or to be used for the purpose of receiving, vending, or delivering any milk, milk cans, vegetables, fruits, merchandise, produce, or any other thing or commodity of any nature unless a permit therefore has first been obtained from WSDOT. WSDOT shall in each instance determine where any platform, box, stand, or any other temporary or permanent device or structure shall be permitted pursuant to RCW 47.32.110.

EROSION CONTROL AND DRAINAGE

11. All discharges to WSDOT right-of-way or upon WSDOT highway right-of-way under WSDOT jurisdiction, if allowed, shall conform to State and Local water quality regulations and shall meet WAC 173-201A (Water Quality Standards for Surface Waters of the State of Washington).
12. During construction of this work, the Permit Holder shall comply with all provisions of the WSDOT Highway Runoff Manual, or WSDOT approved equivalent plan, and implement Best Management Practices (BMP's) to mitigate erosion.

CULTURAL RESOURCES

13. If any archaeological or historical resources are revealed in the Work vicinity, the Permit Holder shall immediately STOP Work, notify WSDOT's Representative and retain a United States Government Secretary of the Interior's qualified archaeologist. Said archaeologist shall evaluate the site and make recommendations to WSDOT regarding the continuance of the Work.

COMPLIANCE WITH CLEARZONE GUIDELINES

14. The Permit Holder hereby agrees that the Work described in this permit is in compliance with WSDOT's Clear Zone Guidelines pursuant to Chapter 1600 of WSDOT's Design Manual ([M 22-01](#)) and any revisions thereto. For any Work performed on a managed access state highway within an incorporated city or town, the Permit Holder may use the applicable city or towns clear zone guidelines if the city or town has their own published clear zone guidelines.

PERMIT EXTENSION AND ASSIGNMENT

15. The expiration date of this Permit may not be extended without WSDOT's prior written approval.
16. This Permit shall not be deemed or held to be an exclusive one and shall not prohibit WSDOT from granting permits or franchise rights; or entering into other agreements with other public or private companies or individuals, nor shall it prevent WSDOT from using any of its highways, streets, or public places, or affect its right to full supervision and control over all or any part of them, none of which is hereby surrendered.

MAINTENANCE DEFICIENCIES

17. The Permit Holder shall correct any maintenance deficiency related to, or contributed to in any way by, the Work within thirty (30) consecutive calendar days upon receiving written notice of such deficiency from WSDOT, unless WSDOT authorizes in writing a different time period. Should the Permit Holder fail to correct a deficiency within the prescribed time period after receiving written notice of the deficiency from WSDOT, WSDOT reserves the right to perform the necessary maintenance work to preserve WSDOT right-of-way or upon state highway right-of-way under WSDOT jurisdiction or for the protection of the traveling public including bicycles or pedestrians. If WSDOT performs maintenance work as provided herein, the Permit Holder agrees to fully reimburse and make payment to WSDOT within thirty (30) calendar days of the date of WSDOT's detailed invoice pursuant to Section 26 – Invoice and Payments, herein. If WSDOT chooses not to make the repairs; WSDOT may initiate an action to revoke this Permit.

INTERFERENCE WITH OTHER PROJECTS

18. The Permit Holder agrees to schedule and perform the Work herein in such a manner as not to interfere with any WSDOT maintenance or other activities on WSDOT right-of-way or upon state highway right-of-way under WSDOT jurisdiction, including any WSDOT authorized construction activities that may be occurring in the general vicinity of the Work authorized by this Permit.

INSURANCE

19. Insurance (Applicable on a case by case basis)

The Permit Holder shall provide proof of insurance coverage prior to performing any Work within State-owned highway right of way, as follows:

- Commercial General Liability covering the risks of bodily injury (including death), property damage, and personal injury, including coverage for contractual liability, with a limit of not less than \$5 million per occurrence and in the aggregate; OR
- Business Automobile Liability (owned, hired, or non-owned) covering the risks of bodily injury (including death) and property damage, including coverage for contractual liability, with a limit of not less than \$1 million per accident; OR
- Employers Liability covering the risks of Permit Holder's employees' bodily injury by accident or disease, with limits of not less than \$1 million per accident for bodily injury by accident and \$1 million per employee for bodily injury by disease.

WSDOT and the State shall be expressly named as an additional insureds under these general liability and automobile liability policies, by endorsing these policies with form CG2010 1185 or CA2048 (as appropriate), which shall contain no additional limitations with respect to completed operations or ongoing operations coverages, nor shall there be any limitation with respect to the negligence of WSDOT and the State. These policies shall be primary and non-contributory with respect to WSDOT and the State, and shall contain a waiver of subrogation in favor of WSDOT and the State. The Permit Holder shall furnish WSDOT proof of these insurance requirements prior to performing any Work under the Permit. A forty-five (45) calendar day written notice shall be given to the Department prior to termination of or any material change to the policy(ies) as such relate(s) to this Permit.

MODIFICATION OR REVOCATION OF THE PERMIT BY WSDOT

- 20a. Modification: If this Permit is modified in writing by WSDOT, the Permit Holder will have thirty (30) calendar days from the date of the written notice to modify the Work as required by WSDOT. If the modifications cannot be made within thirty (30) calendar days, the Permit Holder shall request from WSDOT, in writing, during the prescribed time period, an extension of time in which to make the modifications. Any extension of time shall be made in writing and is solely within WSDOT's discretion.

Should the Permit Holder breach any of the conditions or requirements of the permit or if WSDOT determines that emergency maintenance of the Work is required to (1) protect any aspect of the state highway right-of-way or upon state highway right-of-way under WSDOT jurisdiction, or (2) secure the safety of the traveling public due to a failure of the Permit Holder's Work or its maintenance thereof, WSDOT may perform the emergency maintenance work without the Permit Holder's prior approval, and the Permit Holder agrees to reimburse WSDOT's actual direct and related indirect costs and expenses for performing the emergency maintenance work pursuant to the provisions of Section 26 - Invoice and Payments. WSDOT will notify the Permit Holder of the emergency work performed as soon as practicable.

- 20b. Revocation: If the Permit is revoked and the Permit Holder fails to return the property back to its original condition, as solely determined by WSDOT, WSDOT shall perform such Work at the Permit Holder's sole cost and expense, and the Permit Holder shall reimburse WSDOT's actual direct and related indirect costs and expenses for performing the Work pursuant to the provisions of Section 27 - Invoice and Payments.
- 20c. Plan Corrections: WSDOT reserves the right to require changes or corrections due to plan omissions or details not in conformance with WSDOT's Standard Specifications, Standard Plans, Design Manual, or Project Special Provisions.

MODIFICATION OF THE PERMIT BY THE PERMIT HOLDER

21. If the Permit Holder desires to modify this permit and/or the Work, it shall notify the WSDOT Representative listed in Exhibit A, Special Provisions, in writing of all proposed changes for WSDOT's prior written approval. WSDOT agrees to provide written acceptance or rejection of the proposed change(s) to the Permit Holder within Ten (10) business days.

ADDITIONAL PERMIT CONDITIONS

22. The Permit Holder shall not excavate or place any obstacle within the limits of state highway right-of-way in such a manner as to interfere with WSDOT's construction, operation, and maintenance of the State Highway right-of-way or the public's travel thereon without WSDOT's prior written approval and/or as may be provided in this Permit.
23. Upon completion of all Work, the Permit Holder shall immediately remove all rubbish and debris from WSDOT right-of-way or upon state highway right-of-way under WSDOT jurisdiction, leaving WSDOT right-of-way in a neat, presentable, and safe condition, to WSDOT's sole satisfaction. Any Work-related rubbish and debris clean up, or any necessary slope treatment to restore and/or protect WSDOT right-of-way or upon state highway right-of-way under WSDOT jurisdiction, not done within seven (7) calendar days of Work completion, will be done by WSDOT at the expense of the Permit Holder, unless otherwise approved in writing by WSDOT prior to the expiration of the (7) day period.

The Permit Holder agrees to reimburse WSDOT's actual direct and related indirect costs and expenses for performing the Work pursuant to the provisions of Section 26 - Invoice and Payments.

24. The Permit Holder agrees to maintain, at its sole expense, its Work under this Permit in a manner satisfactory to WSDOT, in WSDOT's sole discretion.
25. WSDOT shall in no way be held liable for any damage to the Permit Holder by reason of any such work by or authorized by WSDOT, its agents or representatives, or by the exercise of any rights by WSDOT upon roads, streets, public places, or structures in question.

EXTENSION OF THE EXPIRATION DATE

26. If requested by the Permit Holder, the Expiration Date of this Permit may be extended by WSDOT after review of the contributing circumstances.

INVOICE AND PAYMENTS

27. If WSDOT deems it necessary to perform Work as provided for in this Permit by WSDOT forces or its' contractor, including but not limited to any modification, repair, clean up or removal of the Work authorized under this Permit:
- WSDOT will assign a reimbursable account to the Permit Holder as a means of invoicing the Permit Holder for the costs associated with the Work performed by WSDOT.
 - WSDOT will provide a detailed invoice, including direct and related indirect costs, to the Permit Holder for the Work performed by WSDOT or its contractor(s), and the Permit Holder agrees to pay WSDOT within thirty (30) calendar days of receipt of an invoice.
 - The Permit Holder agrees that if payment is not made to WSDOT as herein agreed, WSDOT may charge late fees, interest and/or refer the debt to a Collection Agency, all in accordance with Washington State Law.

OTHER PERMITS AND APPROVALS

28. The Permit Holder shall be responsible for securing all necessary permits, including but not limited to, federal, state, and local regulatory, tribal, environmental, archeological, and railroad permits and permits from the Washington State Department of Ecology, the Washington State Department of Fish and Wildlife, and/or the U.S. Army Corps of Engineers prior to beginning the Work authorized by this Permit. The Permit Holder shall be responsible for mitigation measures where wetlands have been disturbed and agrees that it is solely responsible for any fines imposed for noncompliance with the permit(s) conditions or for failure to obtain the required permits. In addition, the Permit Holder, on behalf of itself and its contractors, officers, officials, employees, and agents, agrees to indemnify, hold harmless, and defend, at its sole cost and expense, WSDOT and its officers, officials, employees, and agents from any and all fines, costs, claims, judgments, and/or awards of damages to regulatory agencies, persons, and/or property, arising out of, or in any way resulting from, the Permit Holder's failure to (1) obtain any required permit for the Permit Holder Work or (2) comply with permit conditions.

INDEMNIFICATION, WAIVER, VENUE, AND ATTORNEYS FEES

29. The Permit Holder, its successors and assigns, shall indemnify, defend at its sole cost and expense, and hold harmless the State of Washington, its officers, employees, and agents from all claims, suits, demands, actions for damages (both to persons and/or property), expenses, regulatory fines, and/or suits in law and in equity that (1) arise out of or are incident to, or alleged to arise out of or are incident to, any acts or omissions of the Permit Holder, its agents, contractors, subcontractors, employees, invitees, successors, assigns and/or any other person in the use of the WSDOT-owned highway right-of-way or upon state highway right-of-way under WSDOT jurisdiction as authorized by the terms and conditions of this Permit, or (2) are caused by the breach of any of the terms or conditions of this Permit by the Permit Holder, its successors and assigns, and its contractors, subcontractors, agents, employees, invitees and/or any other person. The Permit Holder, its successors and assigns, shall not be required to indemnify, defend, or hold harmless the State of Washington, its' officers, employees and/or agents, if the claim, suit, or action for damages (both to persons and/or property) is caused by the sole acts or omissions of the State of Washington, its' officers, employees and/or agents; provided that, if such claims, suits, or actions result from the concurrent negligence of (1) the State of Washington, its officers, employees and/or agents, and (2) the Permit Holder, its agents, contractors, subcontractors, employees, invitees, successors, assigns and/or any other person or involves those actions covered by RCW 4.24.115, the indemnity provisions provided herein shall be valid and enforceable only to the extent of the acts or omissions of the Permit Holder, its agents, contractors, subcontractors, employees, invitees, successors, assigns and/or any other person.
30. The Permit Holder agrees that its obligations under this Permit extend to any claim, demand, and/or cause of action brought by, or on behalf of, any of its' employees or agents while performing Work under this Permit while located on or off WSDOT-owned highway right of way or upon state highway right of way under WSDOT jurisdiction. For this purpose, the Permit Holder, by mutual negotiation, hereby waives, with respect to the State of Washington only, any immunity that would otherwise be available to it against such claims under the Industrial Insurance provisions in chapter 51.12 RCW.
31. The indemnification and waiver provided for in Sections 29 and 30 shall survive the termination of this Permit.
32. In the event that the Permit Holder or WSDOT deems it necessary to institute legal action or proceedings to enforce any right or obligation under this Permit, the Permit Holder and WSDOT agree that any such action or proceedings shall be brought in the superior court situated in Thurston County, Washington. Further, the Permit Holder agrees that it shall be solely responsible for its own attorney's fees and costs and agrees that it shall not seek nor be entitled to recovery of such attorney's fees and costs.

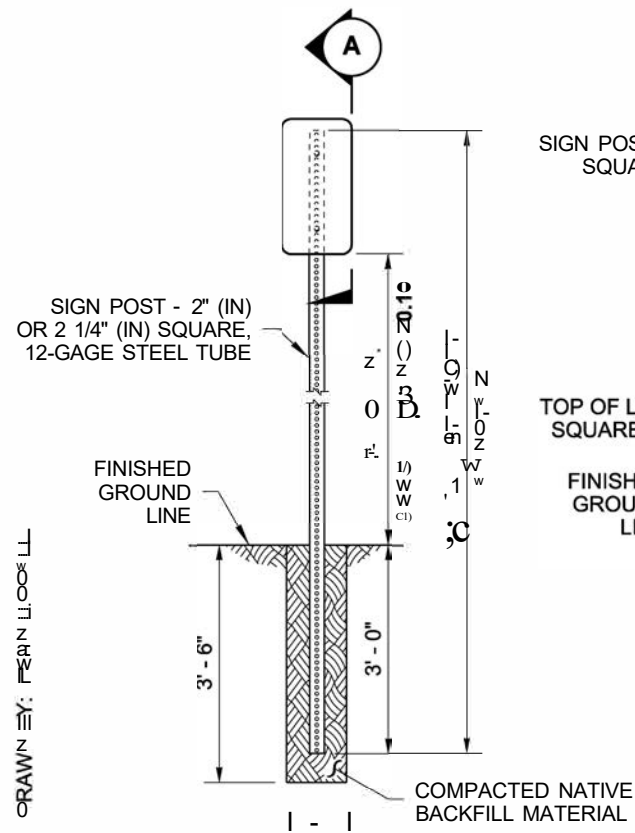
NONAPPLICABILITY OF RELOCATION ASSISTANCE/EMINENT DOMAIN

33. The Permit Holder acknowledges that this Permit does not at any time entitle the Permit Holder, its successors or assigns, to assistance under the Relocation Assistance - Real Property Acquisition Policy (Chapter 8.26 RCW). Further, the revocation or other termination of this Permit shall not be deemed a taking by WSDOT under the laws of eminent domain.

NOTES

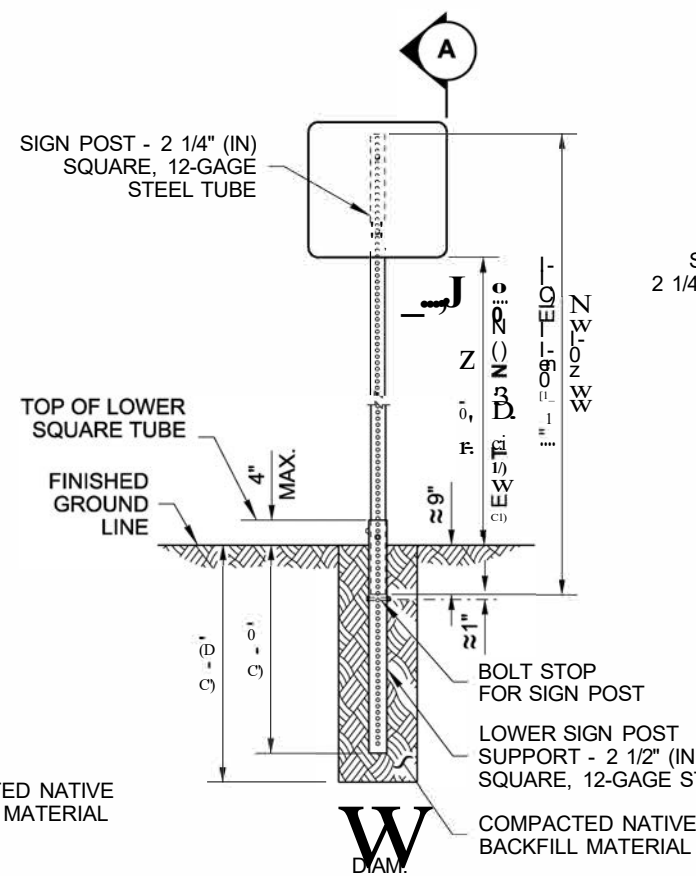
- Dimensions for the parts used to assemble the base connections are intentionally not shown. Base connections are patented, manufactured products that are in compliance with NCHRP 350 crash test criteria. The base connection details are shown on this plan only to illustrate how the parts are assembled.
- For "H1", refer to the Sign Specification Sheet in the Contract.
- A 2" (in) post with a 2 1/4" (in) PSST anchor or a 2 1/4" (in) post with a 2 1/2" (in) PSST anchor may be substituted. See Contract Plans.
- Perforated square steel post shall meet the requirements of **Standard Specification, Section 9-06**.
- Use only base connection manufacturer supplied hardware that meets the requirements of **Standard Specification, Sections 9-06 and 9-28**.

DRAWN BY: PAIN U. O. O. L. L.



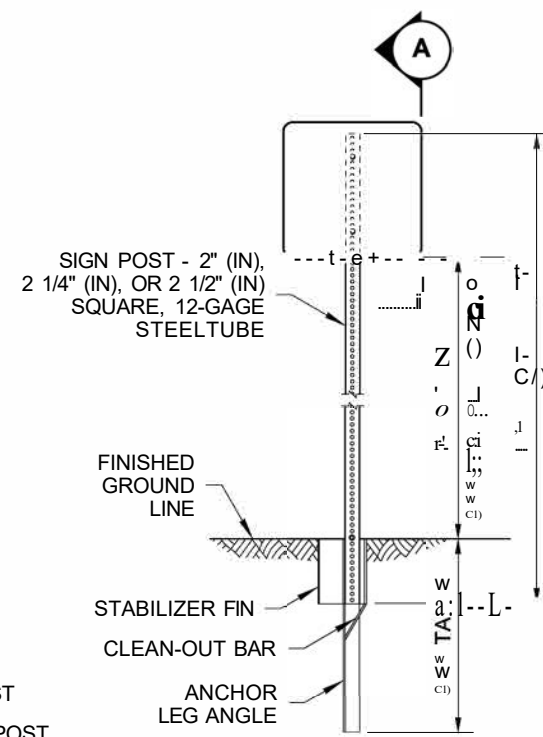
ELEVATION

TYPE ST-1 SIGN SUPPORT



ELEVATION

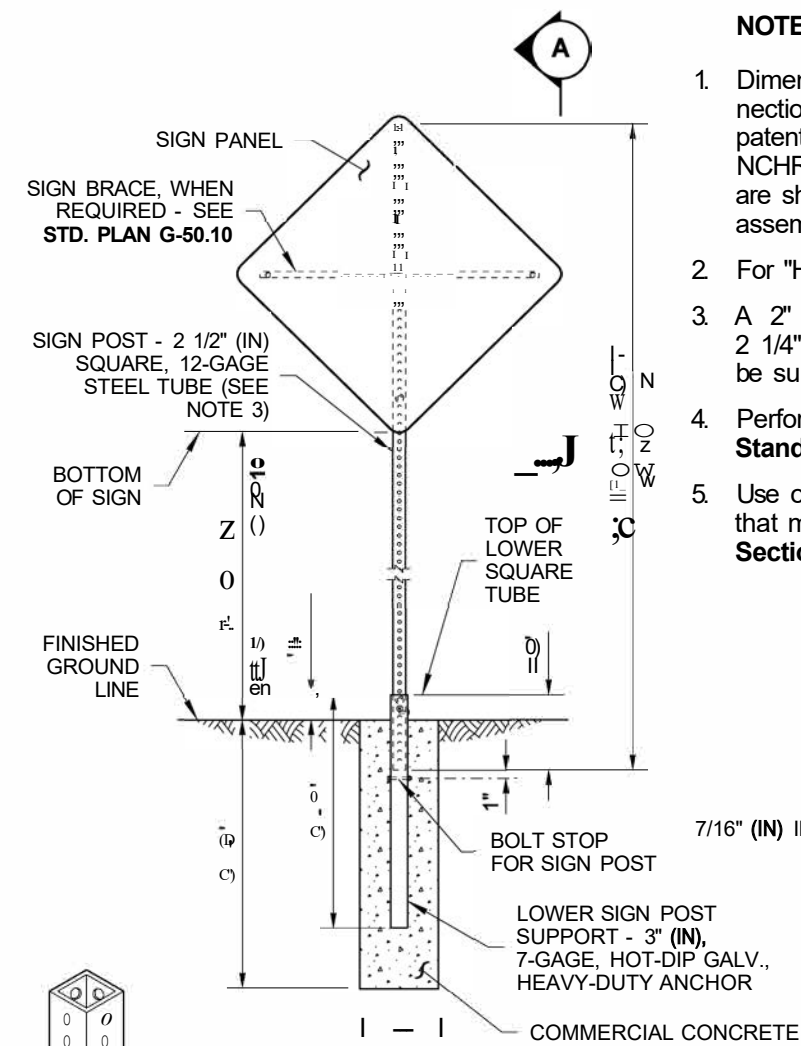
TYPE ST-2 SIGN SUPPORT



ELEVATION

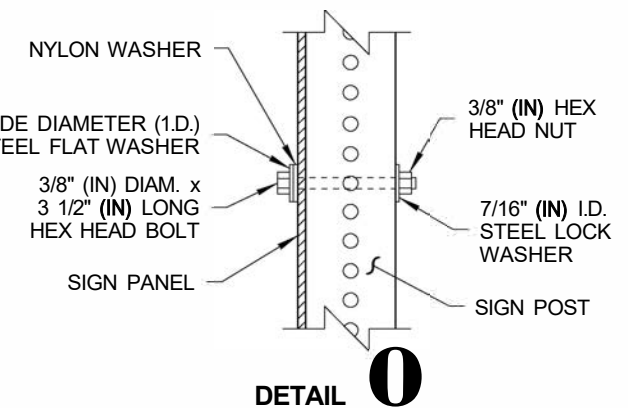
TYPE ST-3 SIGN SUPPORT

BURIED DEPTH	POST SIZE
2' - 6"	2", 2 1/4"
3' - 0"	2 1/2"

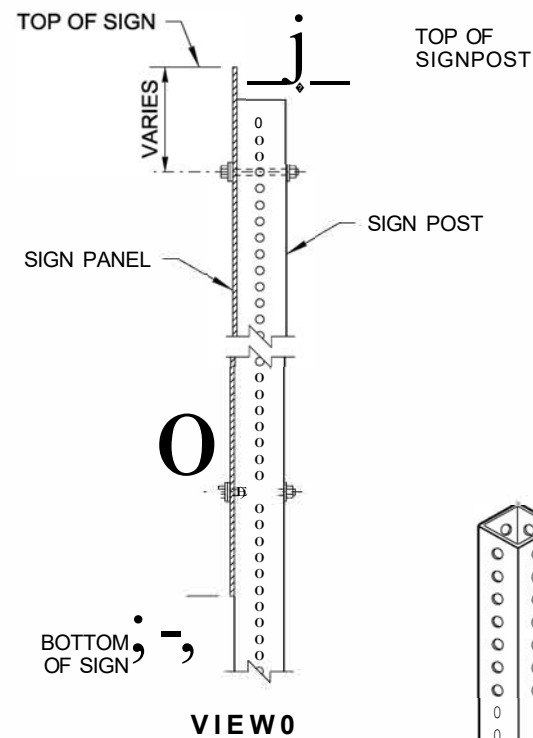


ELEVATION

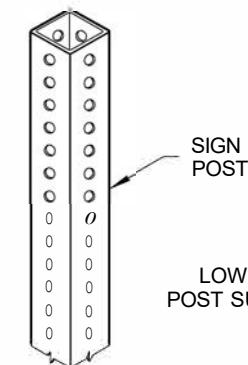
TYPE ST-4 SIGN SUPPORT



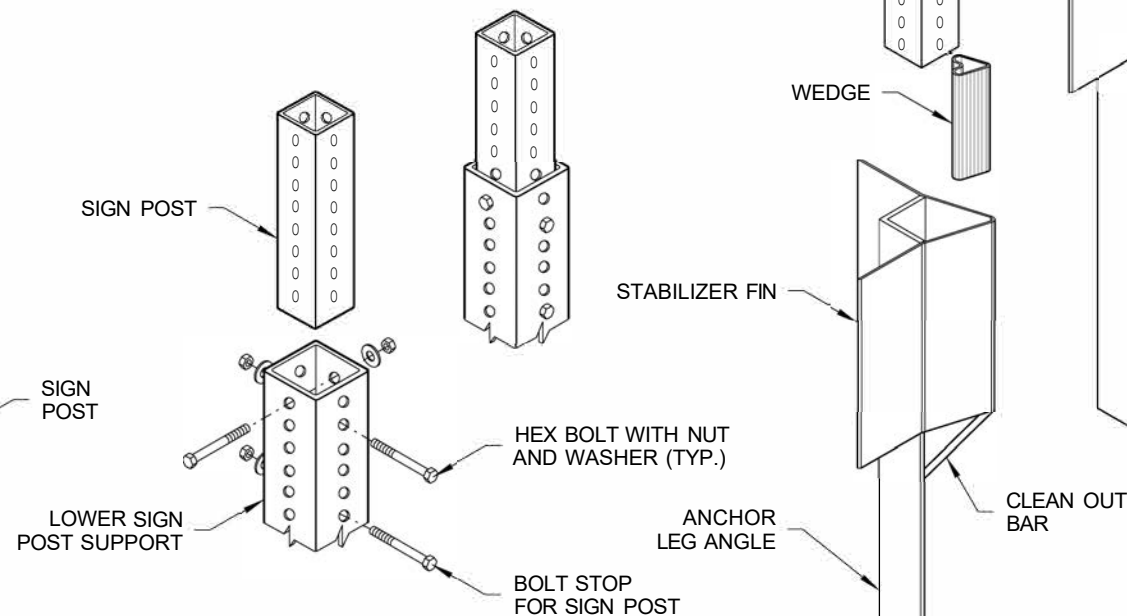
DETAIL



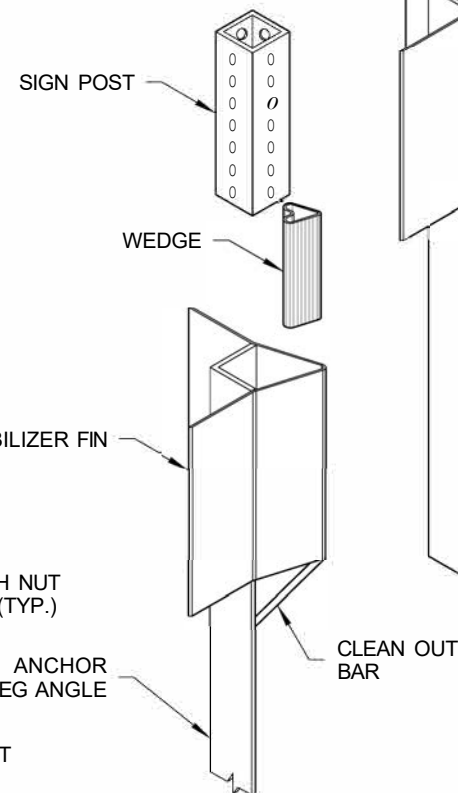
VIEW 0



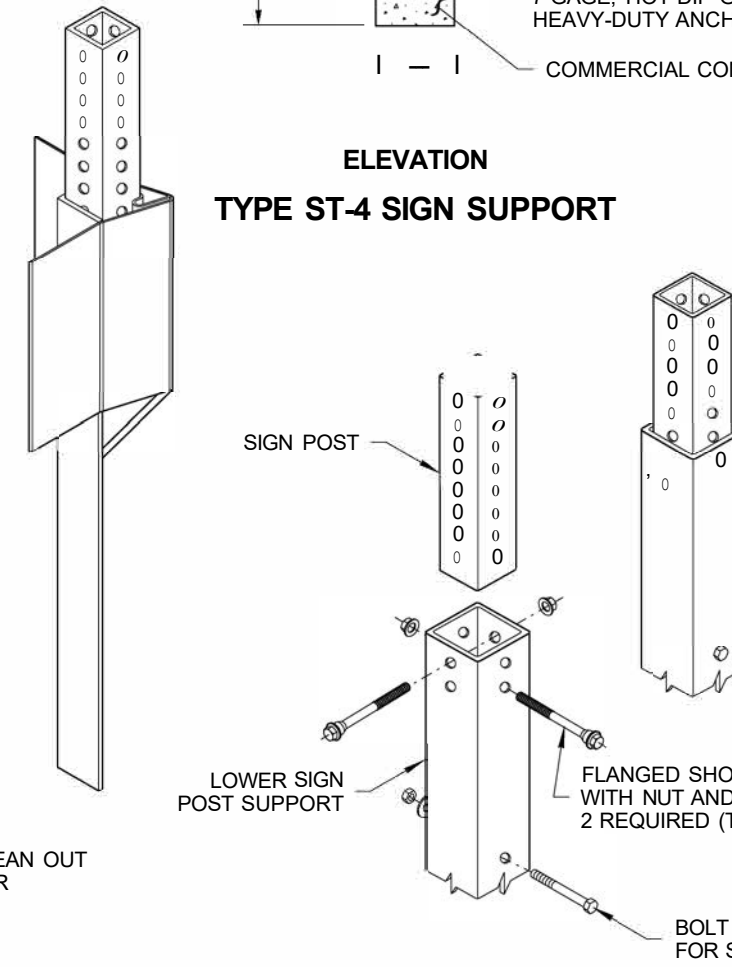
TYPE ST-1



TYPE ST-2



TYPE ST-3



TYPE ST-4



STEEL SIGN SUPPORT TYPES ST-1 - ST-4 INSTALLATION DETAILS STANDARD PLAN G-24.50-05

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER
Washington State Department of Transportation