



MASON TRANSIT AUTHORITY

Shelton, Washington

BID DOCUMENTS FOR:

Log Yard Road and SR 3 Roundabout Project

Prepared by:



MASON TRANSIT AUTHORITY
Log Yard Road and SR 3 Roundabout Project

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MASON TRANSIT AUTHORITY
Log Yard Road and SR 3 Roundabout Project

SECTION I

CALL FOR SEALED BIDS

Mason Transit Authority
Invitation to Bid
Log Yard Road and SR 3 Roundabout Project

Mason Transit Authority (MTA), located in Shelton, Washington, requests Project Proposal SEALED BIDS for construction of the:

MASON TRANSIT AUTHORITY
Log Yard Road and SR 3 Roundabout Project

The improvement(s) for which Project Proposals will be received is described below:

Construction of a roundabout at the intersection of Log Yard Road and State Route 3 in Belfair for the future Mason Transit Authority Belfair Park and Ride Facility, which will include new roundabout construction, Log Yard Road extension construction, frontage road construction, pavement, pavement reconstruction, sidewalk, ADA facilities, stormwater facilities, illumination, signing, striping, and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

Bid Documents, including Plans and Special Provisions, may be obtained through Builders Exchange of Washington (<http://www.bxwa.com>) or MTA's Website (<http://www.masontransit.org>). Inquiries regarding the Project may be directed by contacting Patrick Holm at SCJ Alliance (360-352-1465 or patrick.holm@scjalliance.com).

Project Proposal SEALED BIDS must be received at the Mason Transit Authority Business Office reception desk located at 790 East Johns Prairie Road, Shelton, WA 98584 by 11:00a.m. on September 20, 2019 and MTA then and there will open and publicly read the bids. Bids may be submitted by mail or hand delivery only.

A pre-bid walkthrough is planned for September 5th at 11:00a.m. at the Mason Transit Authority Business Office located at 790 East Johns Prairie Road, Shelton, WA 98584.

Mason Transit Authority reserves the right to reject any and all bids without cause and to waive any informalities or irregularities. MTA reserves the right to award this Contract to the lowest responsive, responsible bidder based on the Bid Proposal.

ADVERTISED IN: Mason Transit Authority Website www.masontransit.org
Builders Exchange of Washington
Seattle Daily Journal of Commerce
Shelton Journal

MASON TRANSIT AUTHORITY
Log Yard Road and SR 3 Roundabout Project

SECTION II

PROJECT PROPOSAL

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2. DEBARMENT, SUSPENSION, INELIGIBILITY OR VOLUNTARY EXCLUSION
CERTIFICATION FORM
3. PROJECT PROPOSAL SIGNATURE PAGE

The Project Proposal shall be returned in the order listed above.

BID FORM/SCHEDULE OF VALUES

As part of the overall Base Bid the Bidder shall assign lump costs (including any and all applicable sales taxes) to the line items listed in the following Schedule of Values. At the end of each month of construction the Contractor will submit an estimated percentage complete for the budget of each line item shown in the Schedule of Values. The Contracting Agency will then review and confirm if the Contractor percentage complete listed on the schedule corresponds to the actual work performed, including materials on hand.

1. Mobilization (includes any incidentals/bond/etc.)	_____
2. Demolition	_____
3. Erosion Control	_____
4. Clearing & Grubbing	_____
5. Grading	_____
6. Stormwater Management Systems	_____
7. Surfacing	_____
8. Paving	_____
9. Illumination System	_____
10. Pavement Markings	_____
11. Permanent Signing	_____
12. Traffic Control	_____
13. Roadway Surveying	_____
14. Clean-Up	_____
<hr/>	
Total Base Bid	_____

Debarment, Suspension, Ineligibility or Voluntary Exclusion Certification Form

NAME	Doing business as (DBA)	
ADDRESS	WA Uniform Business Identifier (UBI)	Federal Employer Tax Identification #:
This certification is submitted as part of a request to contract.		

This certification is required by regulations implementing Executive Order 12549, Debarment and Suspension. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE

- (1) The prospective lower tier participant certifies, by submission of this proposal or contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this form.

Organization Name Project Name

Name(s) and Title(s) of Authorized Representative(s)

Signature(s) Date

Instructions For Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion Lower Tier Covered Transactions

READ CAREFULLY BEFORE SIGNING THE CERTIFICATION. Federal regulations require contractors and bidders to sign and abide by the terms of this certification, without modification, in order to participate in certain transactions directly or indirectly involving federal funds.

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the department, institution or office to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or had become erroneous by reason of changed circumstances.
4. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meaning set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under the applicable CFR, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under applicable CFR, debarred, suspended, ineligible, or voluntarily excluded from covered transactions, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the List of Parties Excluded from Federal Procurement and Non-procurement Programs.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business activity.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under applicable CFR, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.



MASON TRANSIT AUTHORITY - Log Yard Road and SR 3 Roundabout Project

PROPOSAL SIGNATURE FORM

Date: _____

To: MASON TRANSIT AUTHORITY

The bidder is hereby advised that by signature of this Project Proposal he/she is deemed to have acknowledged all requirements and signed all certificates contained herein.

** Receipt is hereby acknowledged of addendum(s) No.(s) _____, _____ & _____

SIGNATURE OF AUTHORIZED OFFICAL (S)

FIRM NAME

(ADDRESS)

Notes:

- (1) This Project Proposal form, including all attached forms and certifications, is not transferable and any alteration of the firm's names entered hereon without prior permission from Mason Transit Authority will be cause for considering the proposal irregular and subsequent rejection of the bid.

MASON TRANSIT AUTHORITY
Log Yard Road and SR 3 Roundabout Project

SECTION III

1. CONTRACT BOND
2. MASON TRANSIT AUTHORITY SAMPLE CONTRACT

**Contract Bond –
Roadway/Site Construction**

KNOW ALL MEN BY THESE PRESENTS, That

of _____, as Principal, and _____ as Surety, are jointly and severally held and bound unto Mason Transit Authority, in the penal sum of _____ Dollars (\$_____), the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators, and assigns, and successors and assigns, firmly by these presents.

The CONDITION of this bond is such that WHEREAS on the _____ day of _____ A.D., _____, the said _____, Principal, herein, executed a certain contract with Mason Transit Authority, by the terms, conditions and provisions of which contract the said _____, Principal, herein, agree to furnish all material and do certain work, to wit: That will undertake and complete the construction of:

Construction of a roundabout at the intersection of Log Yard Road and State Route 3 in Belfair for the future Mason Transit Authority Belfair Park and Ride Facility, which will include new roundabout construction, Log Yard Road extension construction, frontage road construction, pavement, pavement reconstruction, sidewalk, ADA facilities, stormwater facilities, illumination, signing, striping, and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

according to the maps, plans and specifications made a part of said contract, which contract as to executed, is hereunto attached, is now referred to and by reference is incorporated herein and made a part hereof as fully for all purposes as if here set forth at length. This bond shall cover all approved change orders as if they were in the original contract.

NOW THEREFORE, if the Principal herein shall faithfully and truly observe and comply with the terms, conditions, and provisions of said contract in all respects and shall well and truly and fully do and perform all matters and things by them undertaken to be performed under said contract, upon the terms proposed therein, and within the time prescribed therein, and until the same is accepted, and shall pay all laborers, mechanics, subcontractors, and material men, and all persons who shall supply such contractor or subcontractor with provisions and supplies for the carrying on of such work, and shall in all respects, faithfully perform said contract according to law, then this obligation to be void, otherwise to remain in full force and effect.

WITNESS our hands this _____ day of _____, _____

(Principal)

(Attorney-in-fact, Surety)

Name and Address Local Office of Agent

APPROVED:

Mason Transit Authority

General Manager

By: _____

Date: _____

Surety Bond No.

Project

AGREEMENT BETWEEN OWNER AND CONTRACTOR

The Effective Date of this Contract is:	
<u>The Parties to this Contract are:</u>	
The “Owner”	Mason Transit Authority
The “Contractor”	
Project Name:	
The “Architect” or “Engineer:”	
The “Work:”	See “Scope of Work,” Exhibit _____
Alternates included in the Contract Sum:	
Contract Sum for the Work: <i>(not including sales tax)</i>	\$ _____
Payments: <i>(check one)</i>	<input type="checkbox"/> The Owner will make a single payment to the Contractor within thirty (30) days of Final Acceptance. <input type="checkbox"/> See Supplemental Conditions
Date of Substantial Completion of the Work:	
Date of Final Completion of the Work:	_____ days after Substantial Completion
Liquidated Damages:	\$___ per day for each calendar day beyond the Contract Time that Substantial Completion is not achieved.
Owner’s Permit Responsibilities:	
Unit Prices:	
<u>Minimum Required Insurance:</u>	
Commercial General Liability:	At least \$1 million per occurrence and general aggregate.
Automobile Liability:	At least \$1 million
Workers’ Compensation (industrial insurance):	At least the State statutory amount
Employer’s Liability:	At least \$1 million
Aircraft Liability:	At least \$5 million
Watercraft Liability:	At least \$1 million
Property Insurance:	Full insurable value
Boiler and Machinery Insurance:	
Additional Insureds:	Mason Transit Authority

The Owner and Contractor agree as set forth below.

ARTICLE 1: THE WORK. The Contractor shall fully execute and complete the entire Work described in the Contract Documents, including the Alternates listed above.

ARTICLE 2: COMMENCEMENT AND SUBSTANTIAL AND FINAL COMPLETION.

2.1 The date of commencement of the Work is the date of this Agreement. The Contract Time is measured from the date of commencement to the date of Substantial Completion specified above, as it may be adjusted under the Contract Documents.

2.2 The Contractor shall achieve Substantial Completion and Final Completion of the entire Work within the dates specified above, subject to adjustments of the Contract Time as provided in the Contract Documents.

ARTICLE 3: THE CONTRACT SUM. The Owner shall pay the Contractor the Contract Sum for the Contractor’s performance of this Contract, subject to additions and deductions as provided in the Contract Documents. Sales tax is not included in the Contract Sum.

ARTICLE 4: PAYMENT. The Owner will pay the Contractor within *thirty (30) days* of receipt of an approved Application for Payment in accordance with this Contract. Retainage will be released in accordance with statutory requirements.

ARTICLE 5: PERMITS AND FEES.

5.1 The Owner will secure and pay for only those governmental permits, approvals, fees, licenses, inspections, governmental charges and inspection fees listed on the cover page.

5.2 The Contractor shall secure and pay for all other governmental permits, approvals, fees, licenses, inspections, governmental charges and inspection fees required for the prosecution of the Work.

ARTICLE 6: ENUMERATION OF CONTRACT DOCUMENTS.

6.1 The Contract Documents form this Contract. This Contract represents the entire and integrated agreement between the parties and supersedes prior negotiations, representations or agreements, either written or oral. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Owner and a Subcontractor of any tier, between any Architect and the Contractor, or between any persons or entities other than the Owner and the Contractor.

6.2 The Contract Documents are enumerated as follows and, in the event of a conflict or discrepancy among or in the Contract Documents, interpretation shall be governed in the following order of priority:

- | | |
|---|---|
| 1. Agreement | 4. General Conditions |
| 2. Supplemental Conditions | 5. Scope of Work (See Exhibit __) |
| 3. Prevailing wage rates set by L&I as of the bid date for Mason County (available at http://www.lni.wa.gov/TradesLicensing/PrevWage/WageRates/default.asp) | 6. Drawings and Specifications (See Exhibit __) |
| | 7. Site Conditions and Coordination |
| | 8. Requirements of Grant Funding |

OWNER

By _____
(Signature)

(Printed name and title)

CONTRACTOR

By _____
(Signature)

(Printed name and title)

GENERAL CONDITIONS

ARTICLE 7 THE CONTRACT DOCUMENTS

7.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contractor's performance shall be consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.

7.2 "Work" means the construction and services required by the Contract Documents and includes all labor, materials, equipment and services to be provided by the Contractor to fulfill its obligations.

7.3 If the Contractor finds a conflict, error or discrepancy in the Contract Documents, the Contractor shall report it to the Owner in writing at once. The Contractor shall not proceed with the affected Work until it receives a written interpretation or clarification from the Owner.

ARTICLE 8 ADMINISTRATION OF THE CONTRACT

8.1 The Owner will provide administration of the Contract. If an Architect or Engineer is also involved, its duties beyond those addressed in these General Conditions will be described in an attachment to this Contract.

8.2 Authority. The Owner must approve in writing all changes in the Contract Sum or Contract Time as well as all Change Orders, Construction Change Directives, and payments to the Contractor. The Owner will make any modification or release of any requirement of the Contract Documents, or any approval or acceptance of any portion of the Work, whether or not executed in accordance with the Contract Documents, exclusively in writing.

8.3 Rejection of Work. The Owner may reject Work that, in its opinion, does not conform to the Contract Documents. If the Contractor fails to correct Work that is not in accordance with the Contract Documents or fails to carry out the Work in accordance with the Contract Documents, the Owner may order the Contractor in writing to stop the Work, or any portion thereof, until the cause for that order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right.

8.4 Site Access. The Owner shall have access to and may visit the Work site at intervals it considers appropriate to the stage of the Work to become generally familiar with the progress and quality of the completed Work, but the Owner will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.

8.5 Submittals. The Contractor shall review, approve and submit to the Owner with reasonable promptness shop drawings, product data, samples and similar submittals required by the Contract Documents. The Owner will review and approve or take other appropriate action upon the Contractor's submittals for the limited purpose of checking for conformance with information given and the design concept expressed by the Contract Documents. The Work shall be in accordance with approved submittals. The Owner's review and approval does not relieve the Contractor of responsibility for compliance with the Contract Documents. The Contractor shall submit to the Owner any proposed change to or deviation from previously approved documents or submittals.

ARTICLE 9 THE CONTRACTOR

9.1 Using its best skill and attention, the Contractor shall perform, supervise and direct the Work. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, procedures and personnel, for safety, and for coordinating all portions of the Work under this Contract. The Contractor shall provide and pay for all labor, materials, equipment, tools and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

9.2 Subcontractors. A "Subcontractor" is a person or entity that has a direct contract with the Contractor to perform a portion of the Work at the site or to supply materials or equipment. A "Subcontractor of any tier" includes Subcontractors and lower-level subcontractors and suppliers.

9.2.1 Identification. As soon as practicable and no later than *fourteen (14) days* after award of this Contract, the Contractor shall confirm to the Owner in writing the names of the Subcontractors for each portion of the Work.

9.2.2 Subcontracts. Contracts between the Contractor and Subcontractors shall require each Subcontractor to be bound to the Contractor by the terms of the Contract Documents for the Work to be performed by the Subcontractor and to assume toward the Contractor all the obligations and responsibilities that the Contractor, by the Contract Documents, assumes toward the Owner.

9.2.3 **Payment.** The 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 for which the Owner has paid (including, but not limited to, workers and Subcontractors). The Contractor shall furnish to the Owner releases of liens and claims and other documents that the Owner requests from time to time to evidence such payment (and discharge). Nothing in the Contract Documents shall obligate the Owner to pay or to cause the payment of any moneys due to any Subcontractor of any tier or other person or entity, except as may otherwise be required by law or regulation.

9.3 **Workers.** The Contractor shall enforce strict discipline and good order among persons carrying out the Work and shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. At no change to the Contract Sum or Contract Time, the Owner may provide written notice requiring the Contractor to remove from the Work any employee or other person carrying out the Work that the Owner considers objectionable.

9.4 **Warranty.** The Contractor warrants that materials and equipment furnished under this Contract will be of good quality and new, that the Work will be performed in a workmanlike manner, free from defects not inherent in the quality required, and that the Work will conform with the requirements of the Contract Documents.

9.5 **Progress Schedule.** Within *fourteen (14) days* of execution of this Contract, the Contractor shall submit a schedule of the Work to the Owner ("Progress Schedule"). The Contractor will be responsible for planning, scheduling, managing, and reporting the progress of the Work in accordance with all of the specific methods and submittals described in the Contract Documents. The Contractor shall use the Progress Schedule (as updated) to plan, coordinate, and prosecute the Work in an orderly and expeditious manner.

9.6 **Clean-Up.** The Contractor shall keep the site and surrounding area free from accumulation of waste materials caused by operations under the Contract.

9.7 **Indemnification.**

9.7.1 Subject to the following conditions and to the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless the Owner and its agents, employees, consultants, successors and assigns (together, the "Indemnified Parties") from and against all claims, damages, losses and expenses, direct and indirect, or consequential, including but not limited to costs, attorneys' fees, and other litigation expenses incurred on such claims and in proving the right to indemnification, arising out of or resulting from the performance of the Work by or any act or omission of the Contractor, its agents, any Subcontractor of any tier, and anyone directly or indirectly employed by them (together, the "Indemnitor").

.1 The Contractor will fully indemnify and defend the Indemnified Parties for the sole negligence of the Indemnitor.

.2 The Contractor will indemnify and defend the Indemnified Parties for the concurrent negligence of the Indemnitor only to the extent of the Indemnitor's negligence. The Contractor agrees to being added by the Owner as a party to any mediation, arbitration or litigation with third parties in which the Owner alleges indemnification or contribution from the Indemnitor. The Contractor agrees that all of its Subcontractors of any tier will similarly stipulate in their subcontracts. To the extent a court or arbitrator strikes any portion of this indemnification provision for any reason, all remaining provisions shall retain their vitality and effect.

9.7.2 After mutual negotiation of the parties, the indemnification obligation shall not be limited by the amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts in claims by an employee of the Contractor or a Subcontractor of any tier against any person or entity indemnified under this Paragraph 9.7. For the sole purpose of effecting the indemnification obligations under this Contract and not for the benefit of any third parties unrelated to the Owner, the Contractor specifically and expressly waives any immunity that may be granted it under Title 51 RCW, "Industrial Insurance." IF THE CONTRACTOR DOES NOT AGREE WITH THIS WAIVER, IT MUST PROVIDE A WRITTEN NOTICE TO THE OWNER PRIOR TO THE DATE FOR THE RECEIPT OF BIDS, OR THE CONTRACTOR WILL BE DEEMED TO HAVE NEGOTIATED AND WAIVED THIS IMMUNITY.

9.8 **Records.** The Contractor shall maintain and preserve books, ledgers, records, estimates, correspondence, logs, schedules, electronic data and other documents relating or pertaining to the costs and/or performance of the Contract ("records"). Within *seven (7) days* of the Owner's request, the Contractor shall make available at the Contractor's office all records for inspection, audit and reproduction (including electronic reproduction) by the Owner's representatives. These requirements apply to each Subcontractor of any tier. The Contractor agrees, on behalf of itself and Subcontractors of any tier, that the invocation of any rights under RCW 42.56 shall initiate an equivalent right to disclosures from the Contractor and Subcontractors of any tier for the benefit of the Owner.

9.9 **Compliance with Law.** The Contractor, its employees, Subcontractors of any tier and representatives, shall comply with all applicable laws, ordinances, statutes, rules and regulations, federal and state, county and municipal.

9.9.1 **Prevailing Wages.** The Contractor shall comply with all applicable provisions of RCW 39.12, including but not limited to submission of approved "Statements of Intent to Pay Prevailing Wage," payment of all Labor & Industries' fees, submission and posting of approved "Statements of Intent to Pay Prevailing Wages" and payment of prevailing wages. The State of Washington prevailing wage rates applicable for this public works project, which is located in Mason County, may be found at the following website

address of the L&I: <http://www.lni.wa.gov/TradesLicensing/PrevWage/WageRates/default.asp>. The Contractor shall keep a paper copy at the Project site.

9.9.2 Hours of Labor. The Contractor shall comply with all applicable provisions of RCW 49.28.

9.9.3 Worker's Right to Know. The Contractor shall comply with RCW 49.70 and WAC 296-62-054 regarding workplace surveys and material safety data sheets for "hazardous" chemicals at the Project site.

ARTICLE 10 **CONSTRUCTION BY THE OWNER OR BY SEPARATE CONTRACTORS**

10.1 The Owner may perform construction or operations related to the Project with its own forces and may award separate contracts in connection with other portions of the Project or other construction or operations on the site under contractual conditions consistent with those of the Contract Documents.

10.2 The Contractor shall afford the Owner and separate contractors reasonable opportunity for the introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations.

ARTICLE 11 **CHANGES IN THE WORK**

11.1 The Owner, without invalidating this Contract, may order changes in the Work consisting of additions, deletions or modifications ("Changes"), and the Contract Sum and Contract Time will be adjusted accordingly. Changes in the Work, in the Contract Sum and/or in the Contract Time shall be authorized only by written Change Order signed by the Owner and the Contractor or by written Construction Change Directive signed by the Owner.

11.1.1 Change Orders. A Change Order is a written instrument signed by the Owner and the Contractor stating their agreement upon a change in the Work, the amount of any adjustment in the Contract Sum, and the extent of any adjustment in the Contract Time.

11.1.2 Construction Change Directives. A Construction Change Directive is a written order prepared and signed by the Owner that directs a change in the Work and states a proposed basis for any adjustment in the Contract Sum and/or Contract Time. It is used in the absence of total agreement on the terms of a Change Order. The Contractor shall promptly proceed with the change in the Work described in the Construction Change Directive. As soon as possible, and within *seven (7) days* of receipt, the Contractor shall advise the Owner in writing of the Contractor's agreement or disagreement with the cost or the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

11.2 Costs of Changes and Claims. If the parties cannot agree on the cost or credit to the Owner from a Construction Change Directive or other Change in the Work, the Contractor and all affected Subcontractors of any tier shall keep and present an itemized accounting with supporting data. The total cost of any Change or Claim shall be limited to the reasonable value of the direct labor costs, material costs, construction equipment usage costs for the actual time equipment appropriate for the Work is used solely on the Change in the Work, the cost of any change in insurance, Subcontractor costs, and a fee for all combined overhead and profit, including impact costs of any kind, limited to twelve percent (12%) of the cost for any materials or work performed by the forces of the Contractor or a Subcontractor and eight percent (8%) of amounts due to Subcontractors.

11.3 Claims for Concealed or Unknown Conditions. If conditions are encountered at the site that are (1) concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found and generally recognized as inherent in activities of the character provided for in the Contract Documents, then the Contractor shall give written notice to the Owner promptly before conditions are disturbed and in no event later than *seven (7) days* after the first observance of the conditions. The Contractor shall make any Claim arising from such condition in accordance with the dispute resolution procedures of Article 19.

ARTICLE 12 **TIME**

12.1 Delay.

12.1.1 Time. If the Work is delayed by changes ordered in the Work, unanticipated general labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably anticipatable, unavoidable casualties or any other causes beyond the Contractor's control, then the Contract Time shall be extended by Change Order to the extent the critical path is affected.

12.1.2 Damages. The Contractor and Sub-contractors shall be entitled to damages for delay only where the Owner's actions or inactions were the actual, substantial cause of the delay and where the Contractor could not have reasonably avoided the delay by the exercise of due diligence.

12.1.3 **Contractor Delay.** If a delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum.

12.2 Completion and Liquidated Damages. The timely completion of the Project is essential to the Owner. The Owner will incur serious and substantial damages if Substantial Completion of the Work does not occur within the Contract Time. The Contractor is responsible for actual damages for delay unless an amount is inserted on the cover page for liquidated damages, in which case the liquidated damage amount shall apply. Liquidated damages shall not be affected by partial completion, occupancy, or beneficial occupancy.

ARTICLE 13

PAYMENTS AND COMPLETION

13.1 Payments. Payment shall be made as provided in this Contract, including any Supplemental Conditions.

13.2 Withheld Payment. The Owner may withhold payment in whole or in part, or it may nullify the whole or part of a payment previously issued, on account of (1) defective Work not remedied, (2) claims or liens filed by third parties, (3) failure of the Contractor to make payments due to Subcontractors or for labor, materials or equipment, (4) damage to the Owner or another contractor, (5) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum, (6) reasonable evidence that the unpaid balance would not be adequate to cover actual or liquidated damages for delay for which the Contractor is responsible, (7) failure to carry out the Work in accordance with the Contract Documents, or (8) liquidated damages. The Owner will provide the Contractor with written notice of its intent to implement this provision and provide details supporting the Owner's intention. The Contractor will be afforded reasonable time following receipt of such notice to respond to or correct the circumstances provoking this action by the Owner.

13.3 Substantial Completion.

13.3.1 Substantial Completion is the stage in the progress of the Work when the construction is sufficiently complete, in accordance with the Contract Documents, so the Owner can fully utilize the Work (or a designated portion) for its intended use. All Work other than incidental corrective or punchlist work and final cleaning shall have been completed. The Work is not Substantially Complete if all systems and parts affected by the Work are not usable, any required occupancy or use permit has not been issued, or if utilities affected by the Work are not connected and operating normally. The fact that the Owner may use or occupy some or all of the Work does not indicate that the Work is Substantially Complete, nor does it toll or change any liquidated damages due the Owner.

13.3.2 When the Contractor believes that the Work has achieved Substantial Completion, it shall notify the Owner in writing. When the Owner agrees, it will issue a Certificate of Substantial Completion.

13.3.3 Immediately before any occupancy, the Owner will schedule an inspection tour of the area to be occupied. Representatives of the Owner and the Contractor will jointly tour the area and record items still remaining to be finished and/or corrected. The Contractor shall promptly supply and install any such items as well as items missed by the inspection but required or necessary for Final Completion as a part of the Contract Sum.

13.4 Final Completion. After the Contractor has notified the Owner that the Work has been concluded, and the Contractor has submitted the items listed below as may be required at the discretion of the Owner, the Owner will determine in writing that Final Completion has occurred.

- .1 A final Application for Payment.
- .2 An affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or its property might in any way be responsible or encumbered, have been paid or otherwise satisfied.
- .3 Consent of surety to final payment.
- .4 A certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be cancelled or allowed to expire until at least thirty (30) days' prior written notice has been given to the Owner.
- .5 A written statement that the Contractor knows of no substantial reason why the insurance will not be renewable to cover the period required by the Contract Documents.
- .6 Other data establishing payment or satisfaction of or protection (satisfactory to the Owner) against all obligations, such as receipts, releases and waivers of liens and claims.
- .7 Pursuant to RCW 39.12.040, an "Affidavit of Wages Paid" from the Contractor and from each Subcontractor certified by the Industrial Statistician of the Department of Labor and Industries, with the fees paid by the Contractor or Subcontractor.

- .8 A certified statement that the Contractor has closed all necessary permits or otherwise met the requirements of all governing jurisdictions related to this Project.
- .9 Pursuant to RCW 60.28.020, certificates from the Department of Revenue and the Department of Labor and Industries.
- .10 Pursuant to RCW 50.24, a certificate from the Department of Employment Security.
- .11 All deliverables required by the Contract Documents.
- .12 A certification that the materials in the Work are "lead-free" and "asbestos free."
- .13 A legible hard copy of the as-built drawings.

13.5 Final Acceptance and Final Payment.

13.5.1 Pursuant to RCW 60.28, completion of the contract Work shall occur after Final Completion has been achieved and the Owner has formally accepted the Project ("Final Acceptance"). Final Payment shall not become due until after Final Acceptance.

13.5.2 If any Subcontractor of any tier refuses to furnish a release or waiver required by the Owner, the Owner may retain an amount to defray the cost of foreclosing the liens of such claims and to pay attorneys' fees, the total of which shall be no less than one hundred fifty percent (150%) of the claimed amount. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

13.6 Waivers.

13.6.1 Final Payment by the Owner. The making of final payment constitutes a waiver of claims by the Owner except those arising from (1) liens, claims, security interests, or encumbrances arising out of the Contract and unsettled; (2) failure of the Work to comply with the requirements of the Contract Documents; (3) Work subsequently found to be substandard and/or deficient; or (4) terms of warranties required by the Contract Documents or law.

13.6.2 Final Payment to the Contractor. Acceptance of final payment by the Contractor constitutes a waiver of Claims except those previously made in writing and specifically identified as unsettled on the final Application for Payment.

13.6.3 Change Orders. The execution of a Change Order constitutes a waiver of Claims by the Contractor arising out of the Work to be performed or deleted pursuant to the Change Order, except as specifically described in the Change Order.

13.6.4 Reservation of Rights. If the Contractor adds to a Change Order, a Construction Change Directive, or any other document a reservation of rights that has not been initialed by the Owner, any amounts previously agreed shall be considered disputed and not yet payable unless the costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to and initialed by the Owner.

13.6.5 Failure to Exercise. The Owner's failure to exercise any of its rights under this Contract shall not constitute a waiver of any past, present or future right or remedy. Any waiver by the Owner of any right or remedy under this Contract must be in writing and shall apply only to the right or remedy specified.

13.7 Warranty of Title. The Contractor warrants and guarantees that title to the Work, materials and equipment covered by an Application for Payment, whether or not incorporated in the Project, will pass to the Owner no later than the time of payment, free and clear of liens.

ARTICLE 14 **PROTECTION OF PERSONS AND PROPERTY**

14.1 The Contractor shall be solely responsible, and the Owner shall not have responsibility, for all aspects of safety related to this Contract or the Work, including initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury or loss to, persons or property.

14.2 The Contractor shall promptly remedy to the Owner's satisfaction damage or loss to property at the site caused in whole or in part by the Contractor, a Subcontractor of any tier, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable, except for damage or loss attributable to acts or omissions of the Owner or by anyone for whose acts the Owner may be liable that are not attributable to the fault or negligence of the Contractor or a Subcontractor of any tier.

14.3 The Contractor shall not be required to perform without consent any Work relating to asbestos or polychlorinated biphenyl, unless identified as such in the Contract Documents.

ARTICLE 15 INSURANCE AND BONDS

15.1 The Contractor shall, at its own cost, purchase from a company or companies authorized to do business in the State of Washington possessing a Best's policyholder's rating of A- or better and a financial rating of no less than VII, and reasonably acceptable to the Owner, and maintain during the life of this Contract, at least the following insurance. The Contractor shall also cause its Subcontractors of any tier to secure and maintain at least the following insurance. The insurance shall be in force at the time the Work is commenced and shall remain in force until Substantial Completion, unless a later date is specified below.

15.1.1 Contractor's Liability Insurance. The Contractor shall purchase and maintain an occurrence-based Commercial General Liability Insurance Policy and such other insurance as will provide protection from claims set forth below which may arise out of or result from Contractor's operations under the Contract Documents, whether to be performed or furnished by Contractor, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable:

.1 Claims under workers' compensation, disability benefits and other similar employee benefit acts, as required by the laws of the state of Washington, including Contingent Employers Liability (Stop Gap) for all employees of the Contractor and Subcontractors;

.2 If there is an exposure for injury to Contractor's or subcontractors' employees under the United States Longshoremen's and Harbor Workers' Compensation Act, the Jones Act or under laws, regulations or statutes applicable to maritime employees, or any similar laws, regulations or statutes, coverage shall be included for such injuries or claims.

.3 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees and of any person other than the Contractor's employees;

.4 Claims for damages insured by personal injury liability coverage that are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or (b) by any other person for any other reason.

.5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom;

.6 Claims arising out of operation of laws or regulations for damages because of bodily injury or death of any person or for damage to property;

.7 Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle, including coverage for Owned Motor Vehicles, Non Owned Motor Vehicles and Hired or Borrowed Motor Vehicles; and

.8 The comprehensive general liability insurance required by this paragraph must include contractual liability insurance applicable to Contractor's obligations under Paragraph 9.7.

15.1.2 Property Insurance. Unless otherwise provided in the Contract Documents, the Contractor shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to any deductible amounts that may be provided in the Contract Documents). This insurance shall include the interest in the Work of the Owner, Contractor, Subcontractors of any tier, any Architect and consultants, all of whom shall be listed as insureds or primary, non-contributing additional insured parties. Additional insured status shall be evidenced by internal policy provision or by separate external endorsement. This insurance shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss and damage including, without duplication of coverage, theft, vandalism and malicious mischief, collapse, false work and water damage, temporary buildings and debris removal (including demolition occasioned by enforcement of any applicable legal requirements), and such other perils as may be provided in the Contract Documents, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance or otherwise provided in the Contract Documents, the Contractor shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment. The Owner shall bear no responsibility for such portions of the Work or the consequences of their damage or loss.

15.1.3 Boiler and Machinery Insurance. The Contractor shall purchase and maintain such boiler and machinery insurance for applicable equipment utilized or contained in the Work, which will include the interests in the Work of the Owner, Contractor, Subcontractors, any Architect, and consultants, all of whom shall be listed as insured or additional insured parties.

15.1.4 Aircraft/Watercraft Insurance. If the performance of the Work requires the use of any aircraft that are owned, leased,

rented, or chartered by the Contractor or any of its Subcontractors, the Contractor shall secure and maintain Aircraft Liability Insurance for property damage and bodily injury, including passengers and crew. If the performance of the Work requires the use of any watercraft that are owned, leased, rented or chartered by the Contractor or any of its subcontractors, the Contractor shall secure and maintain Watercraft Liability insurance for property damage and bodily injury.

15.3 The Owner's specification or approval of insurance in this Contract or of its amount shall not relieve, limit or decrease the liability of the 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. The Contractor may, at its expense, purchase larger coverage amounts or additional insurance.

15.4 Waiver of Rights

15.4.1 The Owner and Contractor waive all rights against each other for losses and damages caused by any of the perils covered by the policies of insurance provided in response to Paragraphs 15.1.2 and 15.1.3 and any other property insurance applicable to the Work, and also waive such rights against the Subcontractors, Architect, consultants and other parties named as insureds in such policies for losses and damages so caused. Each subcontract between the Contractor and a Subcontractor will contain similar waiver provisions by the Subcontractor in favor of the Owner, Contractor, Architect, consultants and all other parties named as insureds. None of these waivers shall extend to the rights that any of the insured parties may have to the proceeds of insurance held by the Owner as Trustee or otherwise payable under any policy so issued.

15.4.2 The Owner and Contractor intend that any policies provided in response to Paragraphs 15.1.2 and 15.1.3 shall protect the parties insured and provide primary coverage for losses and damages caused by the perils covered thereby. Accordingly, such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any of the parties named as insureds or additional insureds, and if the insurers require separate waiver forms to be signed by the Architect or its consultant, the Owner will obtain the same, and if such waiver forms are required of any Subcontractor, the Contractor will obtain the same.

15.5 Any insured loss under the policies of insurance required by Paragraphs 15.1.2 and 15.1.3 will be adjusted with the Owner and made payable to the Owner as Trustee for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause. The Owner shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as the parties in interest may reach. If no agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Contract Modification or Written Amendment, or be a separate contract, at the Owner's option.

15.6 Endorsements.

15.6.1 The Owner, its officer and employees shall be named as a primary, non-contributing additional insured and coverage shall apply on a primary and non-contributory basis on such policies other than Workers' Compensation. Additional insured status shall be evidenced by internal policy provision or by separate external endorsement. Policies shall contain a provision that the Owner shall be given *thirty (30) days'* written notice by certified mail before cancellation of any insurance or reduction of the amount thereof, or any alteration, modification, restriction or material change thereto. No such cancellation, reduction, alteration, modification, restriction or material change in any policy shall relieve the Contractor of its obligation to maintain coverages in accordance with the Contract Documents.

15.6.2 All insurance policies to be maintained by the Contractor shall provide for Waiver of Subrogation in favor of the Owner.

15.6.3 All insurance policies, except Workers' Compensation, to be maintained by the Contractor shall provide Severability of Interests or Cross Liability Clause and provide that the insurance shall be primary and not excess to or contributing with any insurance or self-insurance maintained by the Owner.

15.7 Certificates evidencing that satisfactory coverage of the type and limits set forth in the Contract Documents shall be furnished to the Owner in a form acceptable to the Owner and shall contain provisions consistent with Paragraph 15.6.

15.8 Irrespective of the requirements of the Contract Documents as to insurance to be carried by the Contractor, insolvency, bankruptcy or failure of any insurance company to pay all claims accruing, shall not be held to relieve the Contractor of any of its obligations.

15.9 The Contractor shall defend, indemnify and hold the Owner harmless from any failure of the Contractor or its Subcontractors of any tier to secure and maintain insurance as required by this Contract.

ARTICLE 16 CORRECTION OF WORK

16.1 The Contractor shall promptly correct Work rejected or failing to conform to the requirements of the Contract Documents at any time through a period of *one (1) year* from the date of Substantial Completion of this Contract or by terms of a longer

manufacturer's warranty or an applicable special warranty required by the Contract Documents.

16.2 If the Contractor fails to carry out or correct Work that is not in accordance with the Contract Documents, the Owner may, by written order, require the Contractor to stop the Work or any portions thereof until the cause for the order has been eliminated, and the Owner may take over and correct some or all of the non-conforming Work at the Contractor's cost.

16.3 Nothing in this Article shall be construed to establish a period of limitation with respect to other obligations that the Contractor might have under the Contract Documents.

ARTICLE 17 MISCELLANEOUS PROVISIONS

17.1 Applicable Law. This Contract shall be governed by the internal law of the State of Washington, without regard to its choice-of-law provisions.

17.2 Compliance with Law. The Contractor shall give notices and comply with applicable laws, rules, regulations and orders of public authorities, including but not limited to RCW 39.06 and RCW 18.27 (Registration), RCW 49.60 (Discrimination), RCW 70.92 (Aged and Handicapped Persons), WAC 296-155 (Safety Standards), RCW 50.24 (Unemployment Compensation), RCW 51 (Industrial Insurance); RCW 82 (State Excise Tax Registration), RCW 39.12.065(3) (prevailing wage violations), Drug-Free Workplace Act of 1988 (Drug-Free Workplace) and RCW 49.26 (any asbestos removal).

17.3 Assignment. The Contractor shall not let, assign or transfer this Contract, or any interest in it or part of it, without the written consent of the Owner.

17.4 The Owner's Site Rules. The Contractor shall comply with the Owner's site and conduct rules.

17.5 Survival of Clauses. The warranty, dispute resolution, and indemnification provisions of this Contract shall survive the termination, cancellation or expiration of this Contract.

17.6 Writing Required. No addition to or modification of this Contract or waiver of any provisions of this Contract shall be binding on either Party unless explicitly made in writing and executed by the Contractor and the Owner.

ARTICLE 18 TERMINATION OF THE CONTRACT

18.1 Termination for Cause by the Contractor. If the Owner fails to make payment of undisputed amounts for a period of *sixty (60) days* through no fault of the Contractor, the Contractor may, upon *seven (7) additional days'* written notice (during which time the Owner has the right to cure), terminate the Contract and recover from the Owner payment for all Work executed in accordance with the Contract Documents.

18.2 Termination for Cause by the Owner. The Owner may, upon *seven (7) days'* written notice to the Contractor, terminate without prejudice the whole or any portion of the Work for cause, including but not limited to the Contractor's material breach of this Contract; failure to prosecute the Work or any portion thereof with sufficient diligence to ensure the Substantial Completion of the Work within the Contract Time; failure to supply a sufficient number of properly skilled workers or proper materials; material disregard of laws, ordinances, rules, regulations or orders of any public authority having jurisdiction; or being adjudged bankrupt, making a general assignment for the benefit of its creditors, or having a receiver appointed on account of the Contractor's insolvency.

18.3 Termination for Convenience by the Owner. The Owner may, at any time upon *seven (7) days'* written notice to the Contractor, terminate (without prejudice to any right or remedy of the Owner) the whole or any portion of the Work for the convenience of the Owner. The Owner shall be liable to Contractor only for the amount reasonably incurred to date and due under Article 13 for the performance of the Work terminated and other pre-approved costs, consistent with the Paragraph 11.2, necessary and reasonably incurred in connection with the termination of the Work.

18.4 Effects of Termination.

18.4.1 The total sum to be paid to the Contractor under this Article 18 shall not exceed the Contract Sum as reduced by the amount of payments otherwise made.

18.4.2 Unless the Owner directs otherwise, after receipt of a notice of termination by the Owner, the Contractor shall promptly stop Work as specified in the notice of termination; place no further orders or subcontracts, except as necessary for completion of non-terminated Work; procure cancellation of all orders and subcontracts to the extent related to the performance of terminated Work; assign to the Owner all of the right, title and interest of the Contractor under all orders and subcontracts; with the Owner's approval, settle outstanding liabilities and claims arising out of such termination of orders and subcontracts not assigned to the Owner; transfer title and deliver to the entity or entities designated by the Owner the fabricated or unfabricated parts, Work in process, partially completed supplies and equipment, materials, parts, tools, dies, jigs and other fixtures, completed Work, supplies

and other material produced as part of, or acquired in connection with the performance of, the Work terminated, and the completed or partially completed plans, drawings, information and other property related to the Work; take such action as may be necessary or as directed by the Owner to preserve and protect the Work and property related to the Project in the possession of the Contractor in which the Owner has an interest; and continue performance only to the extent not terminated.

18.5 Suspension. The Owner may, at its option and at any time, suspend the Contractor's performance of some or all of the Work. The Owner will give the Contractor notice of any such suspension, including the scope of the suspension and the Owner's estimate of the duration of such suspension. During the period of suspension, the Contractor shall use its best efforts to minimize costs associated with such suspension and to protect and maintain the Work. As full compensation for any such suspension, the Contractor will be eligible for an equitable adjustment, which shall not include consequential or indirect damages. Upon receipt of the Owner's notice to resume the suspended performance, the Contractor shall immediately resume performance to the extent required in the notice.

ARTICLE 19 DISPUTE RESOLUTION

19.1 All claims, disputes and other matters in question of the Contractor, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof ("Claims") shall be decided exclusively by the following dispute resolution procedure. Failure to comply with the requirements of this Article 19 shall constitute waiver of the Claim.

19.2 Notice of Claim. The Contractor shall submit notice of all Claims to the Owner in writing within *seven (7) days* of the event giving rise to them and shall include a reasonable description of the event and its probable effect.

19.3 Claim Submission. Within *thirty (30) days* of the effective date of submitting the notice in Paragraph 19.2, the Contractor shall provide the Owner with a written Claim that includes a clear description of the Claim, all changes in cost and in time (direct, indirect, impact, consequential, and otherwise) to which the Contractor and Subcontractors of any tier are entitled, and data supporting the Claim. No act, omission, or knowledge, actual or constructive, of the Owner or any Architect shall in any way be deemed to be a waiver of the requirement for a timely written notice and a timely written Claim unless the Owner and the Contractor sign an explicit, unequivocal written waiver.

19.4 Effective Date. Unless otherwise specified in the Contract Documents, the effective date of any notice or request given in connection with this Contract shall be the date on which it is delivered to the Owner.

19.5 Informal Resolution. The Owner will make a determination of the Claim submitted. If the Contractor disagrees with the determination and wishes to pursue the Claim further, the Contractor must, within *fourteen (14) days* of receipt of the determination, provide the Owner with a written request that a representative of the Contractor, any Architect, and the Owner meet, confer, and attempt to resolve the claim. This meeting will then take place at mutually convenient time and place within *fourteen (14) days* of the Contractor's request.

19.6 Mediation. The Contractor may not bring any litigation against the Owner unless the Claim is first subject to mediation under the Construction Industry Mediation Procedures of the American Arbitration Association ("AAA"). This requirement cannot be waived except by an explicit written waiver signed by the Owner and the Contractor. To initiate the mediation process, the Contractor shall submit a written mediation request to the Owner within thirty (30) days after the meeting undertaken in Paragraph 19.5. If the parties are unable to agree to a mediator within *thirty (30) days* after the Owner's receipt of the written request for mediation, either party may submit a request for mediation to the AAA. An officer of the Contractor and the General Manager or designee of the Owner, both having full authority to settle the Claim, must attend the mediation session. To the extent there are other parties in interest, such as Subcontractors and insurers, their representatives, with full authority to settle the Claim, shall also attend the mediation session. All unresolved Claims in the Project shall be considered at a single mediation session that shall occur prior to Final Acceptance by Owner.

19.7 Litigation. The provisions of Paragraphs 19.1, 19.2, 19.5, and 19.6 are each a condition precedent to the Contractor bringing litigation. All unresolved Claims of the Contractor shall be waived and released unless the Contractor has strictly complied with the time limits of the Contract Documents, and litigation is served and filed within *120 days* after the Date of Substantial Completion as designated in writing by the Owner. This requirement cannot be waived except by an explicit written waiver signed by the Owner and the Contractor. The pendency of mediation shall toll this filing requirement.

19.8 Maintenance of Responsibilities. The parties shall diligently carry on their respective obligations and responsibilities and maintain the Progress Schedule during any dispute resolution proceedings, unless otherwise agreed by both parties in writing.

19.9 Waiver. The requirements of this Article 19 cannot be waived except by an explicit written waiver signed by the Owner and the Contractor. The fact that the Owner and the Contractor may continue to discuss or negotiate a Claim that has or may have been defective or untimely under the Contract Documents shall not constitute waiver of the provisions of the Contract Documents unless the Owner and Contractor sign an explicit, unequivocal written waiver approved by the Owner's Board of Commissioners.

Supplemental Conditions

1. **Progress Payments.** Progress payments shall be made monthly for Work that is duly approved and performed during the calendar month preceding the Application for Payment according to the following procedure.

1.1 **Schedule of Values.** Prior to submitting its first Application for Payment, the Contractor shall submit to the Owner a schedule of values allocating the Contract Sum to the various portions that comprise the Work. The schedule of values shall be prepared in such form and supported by such data as the Owner may require. The schedule of values shall allocate at least three percent (3%) of the original Contract Sum to that portion of the Work between Substantial Completion of the Work and Final Completion, which will be earned upon Final Completion and distributed in the final payment.

1.2 **Draft Application.** Within the first *seven (7) days* of each month, the Contractor shall submit to the Owner a report on the current status of the Work as compared to the Progress Schedule and a draft, itemized Application for Payment for Work performed through the prior calendar month. This shall not constitute a payment request. The Contractor, the Owner and the Architect or Engineer (if any) shall meet within the next *seven (7) days* and confer regarding the current progress of the Work and the amount of payment to which the Contractor is entitled. The Owner may request the Contractor to provide data substantiating the Contractor's right to payment, such as copies of requisitions or invoices from Subcontractors. The Contractor shall not be entitled to make a payment request, nor is any payment due the Contractor, until such data is furnished.

1.3 **Payment Request.** Within *seven (7) days* after the Contractor and the Owner have met and conferred regarding the draft Application for Payment and the Contractor has furnished all data requested, the Contractor may submit a payment request in the agreed-upon amount, in the form of a notarized, itemized Application for Payment for Work performed during the prior calendar month on a form supplied or approved by the Owner. Among other things, the Application shall state that prevailing wages have been paid in accordance with the pre-filed statement(s) of intent to pay prevailing wages on file with the Owner and that all payments due Subcontractors from the Owner's prior payments have been made. The Application shall constitute the Contractor's representation that (1) all payments due Subcontractors from the Owner's prior payments have been made and (2) the Work is current on the Progress Schedule, unless otherwise noted on the Application. If the Contractor believes it is entitled to payment for Work performed during the prior calendar month in addition to the agreed-upon amount, the Contractor may, within the same time period, submit to the Owner a separate written payment request specifying the exact additional amount due, the category in the schedule of values in which the payment is due, the specific Work for which the additional amount is due, and why the additional payment is due.

1.4 **Payments to Subcontractors.** No payment request shall include amounts the Contractor does not intend to pay to a Subcontractor. If, after making a request for payment but before paying a Subcontractor for its performance covered by the payment request, the Contractor discovers that part or all of the payment otherwise due to the Subcontractor is subject to withholding from the Subcontractor for unsatisfactory performance, the Contractor may withhold the amount as allowed under the subcontract, but it shall give the Subcontractor and the Owner written notice of the remedial actions that must be taken as soon as practicable after determining the cause for the withholding but before the due date for the Subcontractor payment, and pay the Subcontractor within *eight (8) working days* after the Subcontractor satisfactorily completes the remedial action identified in the notice.

1.5 **Retainage.** Pursuant to RCW 60.28, the Owner will reserve five percent (5%) from the moneys the Contractor earns on estimates during the progress of the Work, to be retained as a trust fund for the protection and payment of the claims of any person arising under this Contract and the state with respect to taxes imposed pursuant to Title 82 RCW, which may be due from the Contractor. The moneys reserved will be retained in a fund by the Owner until *forty-five (45) days* following formal acceptance of the Project by the Owner ("Final Acceptance"). The Contractor may retain payment of not more than five percent (5%) from the moneys earned by any Subcontractor.

Scope of Work

SAMPLE

List of Drawings and Specifications

SAMPLE

Site Conditions and Coordination

SAMPLE

GRANT CONDITIONS

SAMPLE

MASON TRANSIT AUTHORITY
Log Yard Road and SR 3 Roundabout Project

SECTION IV

1. AMENDMENTS TO THE STANDARD SPECIFICATIONS
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1 **INTRODUCTION**

2 The following Amendments and Special Provisions shall be used in conjunction with the 2018
3 Standard Specifications for Road, Bridge, and Municipal Construction.

4
5 **AMENDMENTS TO THE STANDARD SPECIFICATIONS**

6
7 The following Amendments to the Standard Specifications are made a part of this contract and
8 supersede any conflicting provisions of the Standard Specifications. For informational
9 purposes, the date following each Amendment title indicates the implementation date of the
10 Amendment or the latest date of revision.

11
12 Each Amendment contains all current revisions to the applicable section of the Standard
13 Specifications and may include references which do not apply to this particular project.

14
15 **Section 1-01, Definitions and Terms**
16 **August 6, 2018**

17 **1-01.3 Definitions**

18 The following new term and definition is inserted before the definition for “Shoulder”:

19
20 **Sensitive Area** – Natural features, which may be previously altered by human activity,
21 that are present on or adjacent to the project location and protected, managed, or
22 regulated by local, tribal, state, or federal agencies.

23
24 The following new term and definition is inserted after the definition for “Working Drawings”:

25
26 **WSDOT Form** – Forms developed and maintained by WSDOT that are required or
27 available for use on a project. These forms can be downloaded from the forms catalogue
28 at:

29
30 <http://wsdot.wa.gov/forms/pdfForms.html>

31
32 **Section 1-02, Bid Procedures and Conditions**
33 **June 3, 2019**

34 **1-02.4(1) General**

35 This section is supplemented with the following:

36
37 Prospective Bidders are advised that the Contracting Agency may include a partially
38 completed Washington State Department of Ecology (Ecology) Transfer of Coverage
39 (Ecology Form ECY 020-87a) for the Construction Stormwater General Permit (CSWGP)
40 as part of the Bid Documents. When the Contracting Agency requires the transfer of
41 coverage of the CSWGP to the Contractor, an informational copy of the Transfer of
42 Coverage and the associated CSWGP will be included in the appendices. As a condition
43 of Section 1-03.3, the Contractor is required to complete sections I, III, and VIII of the
44 Transfer of Coverage and return the form to the Contracting Agency.

45
46 The Contracting Agency is responsible for compliance with the CSWGP until the end of
47 day that the Contract is executed. Beginning on the day after the Contract is executed,
48 the Contractor shall assume complete legal responsibility for compliance with the CSWGP

1 and full implementation of all conditions of the CSWGP as they apply to the Contract
2 Work.

3 4 **1-02.5 Proposal Forms**

5 The first sentence of the first paragraph is revised to read:

6

7 At the request of a Bidder, the Contracting Agency will provide a physical Proposal Form
8 for any project on which the Bidder is eligible to Bid.

9

10 **1-02.6 Preparation of Proposal**

11 Item number 1 of the second paragraph is revised to read:

12

13 1. A unit price for each item (omitting digits more than two places to the right of the
14 decimal point),

15

16 In the third sentence of the fourth paragraph, "WSDOT Form 422-031" is revised to read
17 "WSDOT Form 422-031U".

18

19 The following new paragraph is inserted before the last paragraph:

20

21 The Bidder shall submit with their Bid a completed Contractor Certification Wage Law
22 Compliance form (WSDOT Form 272-009). Failure to return this certification as part of
23 the Bid Proposal package will make this Bid Nonresponsive and ineligible for Award. A
24 Contractor Certification of Wage Law Compliance form is included in the Proposal Forms.

25

26 **1-02.13 Irregular Proposals**

27 Item 1(h) is revised to read:

28

29 h. The Bidder fails to submit Underutilized Disadvantaged Business Enterprise Good
30 Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the
31 documentation that is submitted fails to demonstrate that a Good Faith Effort to meet
32 the Condition of Award was made;

33

34 Item 1(i) is revised to read the following three items:

35

36 i. The Bidder fails to submit a UDBE Bid Item Breakdown form, if applicable, as
37 required in Section 1-02.6, or if the documentation that is submitted fails to meet the
38 requirements of the Special Provisions;

39

40 j. The Bidder fails to submit UDBE Trucking Credit Forms, if applicable, as required in
41 Section 1-02.6, or if the documentation that is submitted fails to meet the
42 requirements of the Special Provisions; or

43

44 k. The Bid Proposal does not constitute a definite and unqualified offer to meet the
45 material terms of the Bid invitation.

46

47 **Section 1-03, Award and Execution of Contract** 48 **January 2, 2018**

49 **1-03.3 Execution of Contract**

50 The first paragraph is revised to read:

51

1 Within 20 calendar days after the Award date, the successful Bidder shall return the
2 signed Contracting Agency-prepared Contract, an insurance certification as required by
3 Section 1-07.18, a satisfactory bond as required by law and Section 1-03.4, the Transfer
4 of Coverage form for the Construction Stormwater General Permit with sections I, III, and
5 VIII completed when provided, and shall be registered as a contractor in the state of
6 Washington.
7

8 **1-03.5 Failure to Execute Contract**

9 The first sentence is revised to read:

10
11 Failure to return the insurance certification and bond with the signed Contract as required
12 in Section 1-03.3, or failure to provide Disadvantaged, Minority or Women's Business
13 Enterprise information if required in the Contract, or failure or refusal to sign the Contract,
14 or failure to register as a contractor in the state of Washington, or failure to return the
15 completed Transfer of Coverage for the Construction Stormwater General Permit to the
16 Contracting Agency when provided shall result in forfeiture of the proposal bond or deposit
17 of this Bidder.
18

19 **Section 1-05, Control of Work**

20 **August 6, 2018**

21 **1-05.5 Vacant**

22 This section, including title, is revised to read:

23

24 **1-05.5 Tolerances**

25 Geometrical tolerances shall be measured from the points, lines, and surfaces defined in
26 Contract documents.
27

28

29 A plus (+) tolerance increases the amount or dimension to which it applies, or raises a
30 deviation from level. A minus (-) tolerance decreases the amount or dimension to which it
31 applies, or lowers a deviation from level. Where only one signed tolerance is specified (+
32 or -), there is no specified tolerance in the opposing direction.

33

34 Tolerances shall not be cumulative. The most restrictive tolerance shall control.

35

36 Tolerances shall not extend the Work beyond the Right of Way or other legal boundaries
37 identified in the Contract documents. If application of tolerances causes the extension of
38 the Work beyond the Right of Way or legal boundaries, the tolerance shall be reduced for
39 that specific instance.

40

41 Tolerances shall not violate other Contract requirements. If application of tolerances
42 causes the Work to violate other Contract requirements, the tolerance shall be reduced
43 for that specific instance. If application of tolerances causes conflicts with other
44 components or aspects of the Work, the tolerance shall be reduced for that specific
45 instance.

46

46 **1-05.9 Equipment**

47 The following new paragraph is inserted before the first paragraph:

48

49 Prior to mobilizing equipment on site, the Contractor shall thoroughly remove all loose dirt
50 and vegetative debris from drive mechanisms, wheels, tires, tracks, buckets and
51 undercarriage. The Engineer will reject equipment from the site until it returns clean.

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This section is supplemented with the following:

Upon completion of the Work, the Contractor shall completely remove all loose dirt and vegetative debris from equipment before removing it from the job site.

**Section 1-06, Control of Material
January 7, 2019**

1-06.1(3) Aggregate Source Approval (ASA) Database

This section is supplemented with the following:

Regardless of status of the source, whether listed or not listed in the ASA database the source owner may be asked to provide testing results for toxicity in accordance with Section 9-03.21(1).

1-06.2(2)D Quality Level Analysis

This section is supplemented with the following new subsection:

1-06.2(2)D5 Quality Level Calculation – HMA Compaction

The procedures for determining the quality level and pay factor for HMA compaction are as follows:

1. Determine the arithmetic mean, X_m , for compaction of the lot:

$$X_m = \frac{\sum x}{n}$$

Where:

- x = individual compaction test values for each subplot in the lot.
- $\sum x$ = summation of individual compaction test values
- n = total number test values

2. Compute the sample standard deviation, “S”, for each constituent:

$$S = \left[\frac{n\sum x^2 - (\sum x)^2}{n(n-1)} \right]^{\frac{1}{2}}$$

Where:

- $\sum x^2$ = summation of the squares of individual compaction test values
- $(\sum x)^2$ = summation of the individual compaction test values squared

3. Compute the lower quality index (Q_L):

$$Q_L = \frac{X_m - LSL}{S}$$

Where:

LSL = 92.0

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4. Determine P_L (the percent within the lower Specification limit which corresponds to a given Q_L) from Table 1. For negative values of Q_L , P_L is equal to 100 minus the table P_L . If the value of Q_L does not correspond exactly to a figure in the table, use the next higher value.
5. Determine the quality level (the total percent within Specification limits):
$$\text{Quality Level} = P_L$$
6. Using the quality level from step 5, determine the composite pay factor (CPF) from Table 2.
7. If the CPF determined from step 6 is 1.00 or greater: use that CPF for the compaction lot; however, the maximum HMA compaction CPF using an LSL = 92.0 shall be 1.05.
8. If the CPF from step 6 is not 1.00 or greater: repeat steps 3 through 6 using an LSL = 91.5. The value thus determined shall be the HMA compaction CPF for that lot; however, the maximum HMA compaction CPF using an LSL = 91.5 shall be 1.00.

1-06.2(2)D1 Quality Level Analysis

The following new sentence is inserted after the first sentence:

The quality level calculations for HMA compaction are completed using the formulas in Section 1-06.2(2)D5.

1-06.2(2)D4 Quality Level Calculation

The first paragraph (excluding the numbered list) is revised to read:

The procedures for determining the quality level and pay factors for a material, other than HMA compaction, are as follows:

1-06.6 Recycled Materials

The first three sentences of the second paragraph are revised to read:

The Contractor shall submit a Recycled Material Utilization Plan on WSDOT Form 350-075A within 30 calendar days after the Contract is executed. The plan shall provide the Contractor's anticipated usage of recycled concrete aggregates for meeting the requirements of these Specifications. The quantity of recycled concrete aggregate will be provided in tons and as a percentage of the Plan quantity for eligible material listed in Section 9-03.21(1)E Table on Maximum Allowable percent (By Weight) of Recycled Material.

The last paragraph is revised to read:

Within 30 calendar days after Physical Completion, the Contractor shall report the quantity of recycled concrete aggregates that were utilized in the construction of the project for each eligible item listed in Section 9-03.21(1)E. The Contractor's report shall be provided on WSDOT Form 350-075A, Recycled Concrete Aggregate Reporting.

1 **1-06.6(1)A General**

2 Item 1(a) in the second paragraph is revised to read:

3

- 4 a. The estimated costs for the Work for each material with 25 percent recycled concrete
5 aggregate. The cost estimate shall include for each material a documented price
6 quote from the supplier with the lowest total cost for the Work.

7

8 **Section 1-07, Legal Relations and Responsibilities to the Public**

9 **April 1, 2019**

10 **1-07.5 Environmental Regulations**

11 This section is supplemented with the following new subsections:

12

13 **1-07.5(5) U.S. Army Corps of Engineers**

14 When temporary fills are permitted, the Contractor shall remove fills in their entirety and
15 the affected areas returned to pre-construction elevations.

16

17 If a U.S. Army Corps of Engineers permit is noted in Section 1-07.6 of the Special
18 Provisions, the Contractor shall retain a copy of the permit or the verification letter (in the
19 case of a Nationwide Permit) on the worksite for the life of the Contract. The Contractor
20 shall provide copies of the permit or verification letter to all subcontractors involved with
21 the authorized work prior to their commencement of any work in waters of the U.S.

22

23 **1-07.5(6) U.S. Fish/Wildlife Services and National Marine Fisheries Service**

24 The Contracting Agency will provide fish exclusion and handling services if the Work
25 dictates. However, if the Contractor discovers any fish stranded by the project and a
26 Contracting Agency biologist is not available, they shall immediately release the fish into
27 a flowing stream or open water.

28

29 **1-07.5(1) General**

30 The first sentence is deleted and replaced with the following:

31

32 No Work shall occur within areas under the jurisdiction of resource agencies unless
33 authorized in the Contract.

34

35 The third paragraph is deleted.

36

37 **1-07.5(2) State Department of Fish and Wildlife**

38 This section is revised to read:

39

40 In doing the Work, the Contractor shall:

41

- 42 1. Not degrade water in a way that would harm fish, wildlife, or their habitat.
43
44 2. Not place materials below or remove them from the ordinary high water line
45 except as may be specified in the Contract.
46
47 3. Not allow equipment to enter waters of the State except as specified in the
48 Contract.

49

- 1 4. Revegetate in accordance with the Plans, unless the Special Provisions permit
2 otherwise.
- 3
- 4 5. Prevent any fish-threatening silt buildup on the bed or bottom of any body of
5 water.
- 6
- 7 6. Ensure continuous stream flow downstream of the Work area.
- 8
- 9 7. Dispose of any project debris by removal, burning, or placement above high-
10 water flows.
- 11
- 12 8. Immediately notify the Engineer and stop all work causing impacts, if at any time,
13 as a result of project activities, fish are observed in distress or a fish kill occurs.
- 14

15 If the Work in (1) through (3) above differs little from what the Contract requires, the
16 Contracting Agency will measure and pay for it at unit Contract prices. But if Contract
17 items do not cover those areas, the Contracting Agency will pay pursuant to Section 1-
18 09.4. Work in (4) through (8) above shall be incidental to Contract pay items.

19 20 **1-07.5(3) State Department of Ecology**

21 This section is revised to read:

22
23 In doing the Work, the Contractor shall:

- 24 1. Comply with Washington State Water Quality Standards.
- 25
- 26 2. Perform Work in such a manner that all materials and substances not specifically
27 identified in the Contract documents to be placed in the water do not enter
28 waters of the State, including wetlands. These include, but are not limited to,
29 petroleum products, hydraulic fluid, fresh concrete, concrete wastewater,
30 process wastewater, slurry materials and waste from shaft drilling, sediments,
31 sediment-laden water, chemicals, paint, solvents, or other toxic or deleterious
32 materials.
- 33
- 34 3. Use equipment that is free of external petroleum-based products.
- 35
- 36 4. Remove accumulations of soil and debris from drive mechanisms (wheels,
37 tracks, tires) and undercarriage of equipment prior to using equipment below the
38 ordinary high water line.
- 39
- 40 5. Clean loose dirt and debris from all materials placed below the ordinary high
41 water line. No materials shall be placed below the ordinary high water line
42 without the Engineer's concurrence.
- 43
- 44 6. When a violation of the Construction Stormwater General Permit (CSWGP)
45 occurs, immediately notify the Engineer and fill out WSDOT Form 422-011,
46 Contractor ECAP Report, and submit the form to the Engineer within 48 hours
47 of the violation.
- 48
- 49 7. Once Physical Completion has been given, prepare a Notice of Termination
50 (Ecology Form ECY 020-87) and submit the Notice of Termination electronically
51

- 1 to the Engineer in a PDF format a minimum of 7 calendar days prior to submitting
2 the Notice of Termination to Ecology.
3
4 8. Transfer the CSWGP coverage to the Contracting Agency when Physical
5 Completion has been given and the Engineer has determined that the project
6 site is not stabilized from erosion.
7
8 9. Submit copies of all correspondence with Ecology electronically to the Engineer
9 in a PDF format within four calendar days.

10
11 **1-07.5(4) Air Quality**

12 This section is revised to read:

13
14 The Contractor shall comply with all regional clean air authority and/or State Department
15 of Ecology rules and regulations.
16

17 The air quality permit process may include additional State Environment Policy Act
18 (SEPA) requirements. Contractors shall contact the appropriate regional air pollution
19 control authority well in advance of beginning Work.
20

21 When the Work includes demolition or renovation of any existing facility or structure that
22 contains Asbestos Containing Material (ACM) and/or Presumed Asbestos-Containing
23 Material (PACM), the Contractor shall comply with the National Emission Standards for
24 Hazardous Air Pollutants (NESHAP).
25

26 Any requirements included in Federal and State regulations regarding air quality that
27 applies to the "owner or operator" shall be the responsibility of the Contractor.
28

29 **1-07.7(1) General**

30 The first sentence of the third paragraph is revised to read:

31
32 When the Contractor moves equipment or materials on or over Structures, culverts or
33 pipes, the Contractor may operate equipment with only the load-limit restrictions in
34 Section 1-07.7(2).
35

36 The first sentence of the last paragraph is revised to read:

37
38 Unit prices shall cover all costs for operating over Structures, culverts and pipes.
39

40 **1-07.9(1) General**

41 The last sentence of the sixth paragraph is revised to read:

42
43 Generally, the Contractor initiates the request by preparing standard form 1444 Request
44 for Authorization of Additional Classification and Rate, available at
45 <https://www.dol.gov/whd/recovery/dbsurvey/conformance.htm>, and submitting it to the
46 Engineer for further action.
47

48 **1-07.9(2) Posting Notices**

49 The second sentence of the first paragraph (up until the colon) is revised to read:

50
51 The Contractor shall ensure the most current edition of the following are posted:
52

1 The revision dates are deleted from all items in the numbered list.

2

3 The following new items are inserted after item number 1:

4

5 2. **Mandatory Supplement to EEOC P/E-1** published by US Department of Labor. Post
6 for projects with federal-aid funding.

7

8 3. **Pay Transparency Nondiscrimination Provision** published by US Department of
9 Labor. Post for projects with federal-aid funding.

10

11 Item number 2 through 12 are renumbered to 4 through 14, respectively.

12

13 **1-07.11(2) Contractual Requirements**

14 In this section, “creed” is revised to read “religion”.

15

16 Item numbers 1 through 9 are revised to read 2 through 10, respectively.

17

18 After the preceding Amendment is applied, the following new item number 1 is inserted:

19

20 1. The Contractor shall maintain a Work site that is free of harassment, humiliation, fear,
21 hostility and intimidation at all times. Behaviors that violate this requirement include
22 but are not limited to:

23

24 a. Persistent conduct that is offensive and unwelcome.

25

26 b. Conduct that is considered to be hazing.

27

28 c. Jokes about race, gender, or sexuality that are offensive.

29

30 d. Unwelcome, unwanted, rude or offensive conduct or advances of a sexual
31 nature which interferes with a person’s ability to perform their job or creates an
32 intimidating, hostile, or offensive work environment.

33

34 e. Language or conduct that is offensive, threatening, intimidating or hostile based
35 on race, gender, or sexual orientation.

36

37 f. Repeating rumors about individuals in the Work Site that are considered to be
38 harassing or harmful to the individual’s reputation.

39

40 **1-07.11(5) Sanctions**

41 This section is supplemented with the following:

42

43 Immediately upon the Engineer’s request, the Contractor shall remove from the Work site
44 any employee engaging in behaviors that promote harassment, humiliation, fear or
45 intimidation including but not limited to those described in these specifications.

46

47 **1-07.11(6) Incorporation of Provisions**

48 The first sentence is revised to read:

49

50 The Contractor shall include the provisions of Section 1-07.11(2) Contractual
51 Requirements (1) through (5) and the Section 1-07.11(5) Sanctions in every subcontract
52 including procurement of materials and leases of equipment.

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1-07.15(1) Spill Prevention, Control, and Countermeasures Plan

The last sentence of the first paragraph is revised to read:

An SPCC Plan template and guidance information is available at <http://www.wsdot.wa.gov/environment/technical/disciplines/hazardous-materials/spill-prevent-report>.

1-07.16(2)A Wetland and Sensitive Area Protection

The first sentence of the first paragraph is revised to read:

Existing wetland and other sensitive areas, where shown in the Plans or designated by the Engineer, shall be saved and protected through the life of the Contract.

1-07.18 Public Liability and Property Damage Insurance

Item number 1 is supplemented with the following new sentence:

This policy shall be kept in force from the execution date of the Contract until the Physical Completion Date.

Section 1-08, Prosecution and Progress January 7, 2019

1-08.1 Subcontracting

The first sentence of the seventh paragraph is revised to read:

All Work that is not performed by the Contractor will be considered as subcontracting except: (1) purchase of sand, gravel, crushed stone, crushed slag, batched concrete aggregates, ready-mix concrete, off-site fabricated structural steel, other off-site fabricated items, and any other materials supplied by established and recognized commercial plants; or (2) delivery of these materials to the Work site in vehicles owned or operated by such plants or by recognized independent or commercial hauling companies hired by those commercial plants.

The following new paragraph is inserted after the seventh paragraph:

The Contractor shall not use businesses (material suppliers, vendors, subcontractors, etc.) with federal purchasing exclusions. Businesses with exclusions are identified using the System for Award Management web page at www.SAM.gov.

1-08.5 Time for Completion

Item number 2 of the sixth paragraph is supplemented with the following:

- f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).

1-08.7 Maintenance During Suspension

The fifth paragraph is revised to read:

1 The Contractor shall protect and maintain all other Work in areas not used by traffic. All
2 costs associated with protecting and maintaining such Work shall be the responsibility of
3 the Contractor.
4

5 **Section 1-09, Measurement and Payment**
6 **August 6, 2018**

7 **1-09.2(1) General Requirements for Weighing Equipment**

8 The last paragraph is supplemented with the following:
9

10 When requested by the Engineer, the Contractor's representative shall collect the tickets
11 throughout the day and provide them to the Engineer's designated receiver, not later than
12 the end of shift, for reconciliation. Tickets for loads not verified as delivered will receive
13 no pay.
14

15 **1-09.2(2) Specific Requirements for Batching Scales**

16 The last sentence of the first paragraph is revised to read:
17

18 Batching scales used for concrete or hot mix asphalt shall not be used for batching
19 other materials.
20

21 **1-09.10 Payment for Surplus Processed Materials**

22 The following sentence is inserted after the first sentence of the second paragraph:
23

24 For Hot Mix Asphalt, the Plan quantity and quantity used will be adjusted for the quantity
25 of Asphalt and quantity of RAP or other materials incorporated into the mix.
26

27 **Section 2-02, Removal of Structures and Obstructions**
28 **April 2, 2018**

29 **2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters**

30 In item number 3 of the first paragraph, the second sentence is revised to read:
31

32 For concrete pavement removal, a second vertical full depth relief saw cut offset 12 to 18
33 inches from and parallel to the initial saw cut is also required, unless the Engineer allows
34 otherwise.
35

36 **Section 2-09, Structure Excavation**
37 **April 1, 2019**

38 **2-09.2 Materials**

39 In the first paragraph, the references to "Portland Cement" and "Aggregates for Portland
40 Cement Concrete" are revised to read:
41

42 Cement 9-01
43 Fine Aggregate for Concrete 9-03.1(2)
44

45 **2-09.3(3)B Excavation Using Open Pits – Extra Excavation**

46 The last two paragraphs are deleted and replaced with the following:
47

1 The excavation height (Ht) shall be calculated within a vertical plane as the difference
2 between the lowest elevation in the excavation and the highest elevation of the ground
3 surface immediately adjacent to the excavation. Pavement thickness and other surface
4 treatments existing at the time of the excavation shall be included in the height calculation.
5

6 **Submittals and Design Requirements**

7 Excavations 4-feet and less in height do not require design and submittals. The Contractor
8 shall provide a safe work environment and shall execute the work in a manner that does
9 not damage adjacent pavements, utilities, or structures. If the Engineer determines the
10 Contractor's work may potentially affect adjacent traffic, pavements, utilities, or structures,
11 the Engineer may request a Type 1 Working Drawing from the Contractor. The Contractor
12 shall explain in the Type 1 Working Drawing how the Engineer's concerns will be
13 addressed, why infrastructure will not be damaged by the work, and how worker safety
14 will be preserved.
15

16 For excavations that have soil types and slope geometries defined in WAC 296-155 part
17 N and are between 4-feet and 20-feet in height, the Contractor shall submit Type 2
18 Working Drawings. Required submittal elements include, at a minimum, the following:
19

- 20 1. A plan view showing the limits of the excavation and its relationship to traffic,
21 structures, utilities and other pertinent project elements. If the stability of the
22 excavation requires no-load zones or equipment setback distances, those shall
23 be shown on the plan view.
24
- 25 2. A typical or controlling cross section showing the proposed excavation, original
26 ground line, and locations of traffic, existing structures, utilities, site constraints,
27 surcharge loads, or other conditions that could affect the stability of the slope. If
28 the stability of the excavation requires no-load zones or equipment setback
29 distances, those shall be shown in cross section.
30
- 31 3. A summary clearly describing subsurface conditions, soil type for WAC 296-155
32 part N, and groundwater conditions, sequencing considerations, and governing
33 assumptions.
34

35 Where WAC 296-155 part N requires an engineer's design, the Contractor shall submit
36 Type 2E Working Drawings. Required submittal elements include, at a minimum, the three
37 items above and the following additional items:
38

- 39 4. Supporting calculations for the design of the excavation, the soil and material
40 properties selected for design, and the justification for the selection for those
41 properties, in accordance with the WSDOT *Geotechnical Design Manual* M 46-
42 03.
43
- 44 5. Safety factors, or load and resistance factors used, and justification for their
45 selection, in accordance with the WSDOT *Geotechnical Design Manual* M 46-
46 03, and referenced AASHTO design manuals.
47
- 48 6. A monitoring plan to evaluate the excavation performance throughout its
49 design life.
50

1 7. Any supplemental subsurface explorations made by the Contractor to meet the
2 requirements for geotechnical design of excavation slopes, in accordance with
3 the WSDOT *Geotechnical Design Manual* M 46-03.
4

5 **2-09.3(3)D Shoring and Cofferdams**

6 The first sentence of the sixth paragraph is revised to read:
7

8 Structural shoring and cofferdams shall be designed for conditions stated in this Section
9 using methods shown in Division I Section 5 of the AASHTO *Standard Specifications for*
10 *Highway Bridges* Seventeenth Edition – 2002 for allowable stress design, or the AASHTO
11 *LRFD Bridge Design Specifications* for load and resistance factor design.
12

13 **Section 3-01, Production from Quarry and Pit Sites**
14 **April 2, 2018**

15 **3-01.1 Description**

16 The first paragraph is revised to read:
17

18 This Work shall consist of manufacturing and producing crushed and screened
19 aggregates including pit run aggregates of the kind, quality, and grading specified for use
20 in the construction of concrete, hot mix asphalt, crushed surfacing, maintenance rock,
21 ballast, gravel base, gravel backfill, gravel borrow, riprap, and bituminous surface
22 treatments of all descriptions.
23

24 **Section 4-04, Ballast and Crushed Surfacing**
25 **April 2, 2018**

26 **4-04.3(5) Shaping and Compaction**

27 This section is supplemented with the following new paragraph:
28

29 When using 100% Recycled Concrete Aggregate, the Contractor may submit a written
30 request to use a test point evaluation for compaction acceptance testing in lieu of
31 compacting to 95% of the standard density as determined by the requirements of Section
32 2-03.3(14)D. The test point evaluation shall be performed in accordance with SOP 738.
33

34 **Section 5-01, Cement Concrete Pavement Rehabilitation**
35 **January 7, 2019**

36 **5-01.2 Materials**

37 The reference for Concrete Patching Material is revised to read:
38

39 Concrete Patching Material, Grout, and Mortar 9-20.1
40

41 **5-01.3(1)A1 Concrete Patching Materials**

42 In this section, each reference to “9-20” is revised to read “9-20.1”.
43

44 **5-01.3(4) Replace Cement Concrete Panel**

45 This section’s content is deleted and replaced with the following new subsections:
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5-01.3(4)A General

Curing, cold weather work, concrete pavement construction in adjacent lines, and protection of pavement shall meet the requirements of Section 5-05.3(13) through Section 5-05.3(15). The Contractor, at no cost to the Contracting Agency, shall repair any damage to existing pavement caused by the Contractor’s operations.

5-01.3(4)B Sawing and Dimensional Requirements

Concrete slabs to be replaced as shown in the Plans or staked by the Engineer shall be at least 6.0 feet long and full width of an existing pavement panel. The portion of the panel to remain in place shall have a minimum dimension of 6 feet in length and full panel width; otherwise the entire panel shall be removed and replaced. There shall be no new joints closer than 3.0 feet to an existing transverse joint or crack. A vertical full depth saw cut is required along all longitudinal joints and at transverse locations and, unless the Engineer allows otherwise, an additional vertical full depth relief saw cut located 12 to 18 inches from and parallel to the initial longitudinal and transverse saw cut locations is also required. Removal of existing cement concrete pavement shall not cause damage to adjacent slabs that are to remain in place. In areas that will be ground, slab replacements shall be performed prior to pavement grinding.

Side forms shall meet the requirements of Section 5-05.3(7)B whenever a sawed full depth vertical face cannot be maintained.

5-01.3(4)C Dowel Bars and Tie Bars

For the half of a dowel bar or tie bar placed in fresh concrete, comply with the requirements of Section 5-05.

For the half of a dowel bar or tie bar placed in hardened concrete, comply with the Standard Plans and the following.

After drilling, secure dowel bars and tie bars into the existing pavement with either an epoxy bonding agent Type I or IV as specified in Section 9-26.1, or a grout Type 2 for non-shrink applications as specified in Section 9-20.3.

Dowel bars shall be placed at the mid depth of the concrete slab, centered over the transverse joint, and parallel to the centerline and to the roadway surface, within the tolerances in the table below. Dowel bars may be adjusted to avoid contact with existing dowel bars in the transverse joint at bridge approach slabs or existing panels provided the adjusted dowel bars meet the tolerances below.

Tie bars shall be placed at the mid depth of the concrete slab, centered over the joint, perpendicular to centerline, and parallel to the roadway surface, within the tolerances in the table below. The horizontal position of tie bars may be adjusted to avoid contact with existing tie bars in the longitudinal joint where panel replacement takes place, provided the adjusted tie bars meet the tolerances below.

Placement Tolerances		
	Dowel Bars	Tie Bars
Vertical: Center of Bar to Center of Slab Depth	± 1.00 inch max	± 1.00 inch max
Dowel Bar Centered Over the Transverse Joint	± 1.00 inch max	N/A

Tie Bar Centered Over the Longitudinal Joint	N/A	± 1.00 inch max
Parallel to Centerline Over the Length of the Dowel Bar	± 0.50 inch max	N/A
Perpendicular to Longitudinal Joint Over the Length of the Tie Bar	N/A	± 1.00 inch max
Parallel to Roadway Surface Over the Length of the Bar	± 0.50 inch max	± 1.00 inch max

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Dowel bars and tie bars shall be placed according to the Standard Plan when multiple panels are placed. Panels shall be cast separately from the bridge approach slab.

Dowel bars to be drilled into existing concrete or at a new transverse contraction joint shall have a parting compound, such as curing compound, grease, or other Engineer accepted equal, applied to them prior to placement.

Clean the drilled holes in accordance with the epoxy or grout manufacturer's instructions. Holes shall be clean and dry at the time of placing the epoxy, or grout and tie bars. Completely fill the void between the tie bar and the outer limits of the drilled hole with epoxy or grout. Use retention rings to prevent leakage of the epoxy or grout and support the tie bar to prevent movement until the epoxy or grout has cured the minimum time recommended by the manufacturer.

5-01.3(4)D Foundation Preparation

The Contractor shall smooth the surfacing below the removed panel and compact it to the satisfaction of the Engineer. Crushed surfacing base course, or hot mix asphalt may be needed to bring the surfacing to grade prior to placing the new concrete.

If the material under the removed panel is uncompactable and the Engineer requires it, the Contractor shall excavate the Subgrade 2 feet, place a soil stabilization construction geotextile meeting the requirements of Section 9-33, and backfill with crushed surfacing base course. This Work may include:

1. Furnishing and hauling crushed surfacing base course to the project site.
2. Excavating uncompactable material.
3. Furnishing and placing a soil stabilization construction geotextile.
4. Backfilling and compacting crushed surfacing base course.
5. Removing, hauling and restocking any unused crushed surfacing base course.

5-01.3(4)E Concrete Finishing

Grade control shall be the responsibility of the Contractor.

All panels shall be struck off level with the adjacent panels and floated to a smooth surface.

Final finish texturing shall meet the requirements of Section 5-05.3(11).

1 In areas where the Plans do not require grinding, the surface smoothness will be
2 measured with a 10-foot straightedge by the Engineer in accordance with Section 5-
3 05.3(12). If the replacement panel is located in an area that will be ground as part of
4 concrete pavement grinding in accordance with Section 5-01.3(9), the surface
5 smoothness shall be measured, by the Contractor, in conjunction with the smoothness
6 measurement done in accordance with Section 5-01.3(10).
7

8 **5-01.3(4)F Joints**

9 All transverse and longitudinal joints shall be sawed and sealed in accordance with
10 Section 5-05.3(8). The Contractor may use a hand pushed single blade saw for sawing
11 joints.
12

13 **5-01.3(4)G Cracked Panels**

14 Replacement panels that crack shall be repaired as specified in Section 5-05.3(22) at no
15 cost to the Contracting Agency. When repairing replacement panels that have cracked,
16 epoxy-coated dowel bars meeting the requirements of Section 9-07.5(1) may be
17 substituted for the corrosion resistant dowel bars specified.
18

19 **5-01.3(4)H Opening to Traffic**

20 Opening to traffic shall meet the requirements of Section 5-05.3(17).
21

22 **5-01.3(5) Partial Depth Spall Repair**

23 The second sentence of the third paragraph is revised to read:
24

25 All sandblasting residue shall be removed.
26

27 **5-01.3(7) Sealing Existing Concrete Random Cracks**

28 The second sentence of the second paragraph is revised to read:
29

30 Immediately prior to sealing, the cracks shall be clean.
31

32 **5-01.3(8) Sealing Existing Longitudinal and Transverse Joint**

33 The first sentence of the fifth paragraph is revised to read:
34

35 Immediately prior to sealing, the cracks shall be clean.
36

37 **5-01.3(10) Pavement Smoothness**

38 This section is revised to read:
39

40 Pavement surface smoothness for cement concrete pavement grinding on this project will
41 include International Roughness Index (IRI) testing. Ride quality will be evaluated using
42 the Mean Roughness Index (MRI) calculated by averaging the IRI data for the left and
43 right wheel path within the section.
44

45 **Smoothness Testing Equipment and Operator Certification**

46 Use an inertial profiler and operator that meet the requirements of Section 5-05.3(3)E.
47

48 **Surface Smoothness**

49 Operate the inertial profiler in accordance with AASHTO R 57. Collect two longitudinal
50 traces, one in each wheel path. Collect the control profile at locations designated in Table
51 2 prior to any pavement rehabilitation Work on the areas to be tested. Collect an

1 acceptance profile at locations designated in Table 2 after completion of all cement
 2 concrete pavement grinding on the project. Profiles shall be collected in a continuous
 3 pass including areas excluded from pay adjustments. Provide notice to the Engineer a
 4 minimum of seven calendar days prior to testing.
 5

Table 2 Locations Requiring MRI Testing	
Travel lanes where cement concrete grinding is shown in the plans	Control profile
Additional locations designated by the Engineer	Control profile
Travel lanes with completed cement concrete pavement grinding	Acceptance profile
Bridges, approach panels and 0.02 miles before and after bridges and approach panels and other excluded areas within lanes requiring testing	Control and acceptance profile
Ramps, Shoulders and Tapers	Do not test

6
 7 Within 30 calendar days after the Contractor's testing, the Engineer may perform
 8 verification testing. If the verification testing shows a difference in MRI greater than the
 9 10 percent, the following resolution process will be followed:

- 10
 11 1. The profiles, equipment and procedures will be evaluated to determine the
 12 cause of the difference.
 13
 14 2. If the cause of the discrepancy cannot be resolved the pavement shall be
 15 retested with both profilers at a mutually agreed time. The two profilers will test
 16 the section within 30 minutes of each other. If the retest shows a difference in
 17 MRI equal or greater than the percentages shown in Table 2 of AASHTO R 54
 18 the Engineer's test results will be used for pavement smoothness acceptance.
 19

20 The Contractor shall evaluate profiles for acceptance or corrective action using the
 21 current version of ProVAL and provide the results including the profile data in unfiltered
 22 electronic Engineering Research Division (ERD) file format to the Engineer within 3
 23 calendar days of completing each days profile testing. If the profile data files are created
 24 using an export option in the manufacturer's software where filter settings can be
 25 specified, use the filter settings that were used to create data files for certification.
 26

27 Analyze the entire profile. Exclude areas listed in Table 3.
 28

Table 3 Areas Excluded from MRI Acceptance Requirements	
Location	Exclude
Beginning and end of grinding	Pavement within 0.02 mile

Bridges and approach slabs	The bridge and approach slab and 0.02 mile from the ends of the bridge or approach slab
Defects in the existing roadway identified by the Contractor that adversely affect the MRI such as dips, depressions and wheel path longitudinal joints. ¹	0.01-mile section containing the defect and the 0.01-mile section following the section with the defect.
¹ The presence of defects is subject to verification by the Engineer	

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Report the MRI results in inches per mile for each 0.01-mile section and each 0.10-mile section. Do not truncate 0.10-mile sections for areas excluded from MRI acceptance requirements. MRI requirements will not apply to 0.10-mile sections with more than three 0.01 mile-sections excluded. MRI requirements for the individual 0.01-mile sections shall still apply. The Engineer will verify the analysis.

The MRI for each 0.10 mile of ground lane will comply with the following:

Control Profile MRI per 0.10 Mile	Maximum MRI of Acceptance Profile per 0.10 Mile
≤130 inches/mile	78 inches/mile
>130 inches/mile	0.6 x Control Profile MRI

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The MRI for each 0.01 mile of the completed cement concrete grinding shall not exceed 160 inches/mile.

All Work is subject to parallel and transverse 10-foot straightedge requirements, corrective work and disincentive adjustments.

Surface smoothness of travel lanes including areas subject to MRI testing shall not vary more than 1/8 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline.

The smoothness perpendicular to the centerline will be measured with a 10-foot straightedge within the lanes. There shall be not vertical elevation difference of more than a 1/4 inch between lanes.

Pavement that does not meet these requirements will be subject to corrective Work. All corrective Work shall be completed at no additional expense, including traffic control, to the Contracting Agency. Pavement shall be repaired by one or more of the following methods:

1. Diamond grinding.
2. By other method accepted by the Engineer.

1 Repair areas shall be re-profiled to ensure they no longer require corrective Work. With
2 concurrence of the Engineer, a 10-foot straight edge may be used in place of the inertial
3 profiler.
4

5 If correction of the roadway as listed above either will not or does not produce satisfactory
6 results as to smoothness or serviceability the Engineer may accept the completed
7 pavement and a credit will be calculated in accordance with Section 5-01.5. Under these
8 circumstances, the decision whether to accept the completed pavement or to require
9 corrective work as described above shall be vested entirely in the Engineer.
10

11 **5-01.5 Payment**

12 This section is supplemented with the following:

13
14 "Grinding Smoothness Compliance Adjustment", by calculation.
15 Grinding Smoothness Compliance Adjustments will be based on the requirements in
16 Section 5-01.3(10) and the following calculations:
17

18 A smoothness compliance adjustment will be calculated in the sum of minus \$100
19 for each and every section of single traffic lane 0.01 mile in length and \$1,000 for
20 each and every section of single traffic lane 0.10 mile in length that does not meet
21 the requirements in Section 5-01.3(10) after corrective Work.
22

23 **Section 5-04, Hot Mix Asphalt** 24 **April 1, 2019**

25 **5-04.1 Description**

26 The last sentence of the first paragraph is revised to read:

27
28 The manufacture of HMA may include additives or processes that reduce the optimum
29 mixing temperature (Warm Mix Asphalt) or serve as a compaction aid in accordance with
30 these Specifications.
31

32 **5-04.2 Materials**

33 The reference to "Warm Mix Asphalt Additive" is revised to read "HMA Additive".
34

35 **5-04.2(1) How to Get an HMA Mix Design on the QPL**

36 The last bullet in the first paragraph is revised to read:

- 37
38 • Do not include HMA additives that reduce the optimum mixing temperature or serve
39 as a compaction aid when developing a mix design or submitting a mix design for
40 QPL evaluation. The use of HMA additives is not part of the process for obtaining
41 approval for listing a mix design on the QPL. Refer to Section 5-04.2(2)B.
42

43 In the table, "WSDOT Standard Practice QC-8" is revised to read "WSDOT Standard Practice
44 QC-8 located in the WSDOT Materials Manual M 46-01".
45

46 **5-04.2(1)C Mix Design Resubmittal for QPL Approval**

47 Item number 3 of the first paragraph is revised to read:

- 48
49 3. Changes in modifiers used in the asphalt binder.
50

1 **5-04.2(2)B Using Warm Mix Asphalt Processes**

2 This section, including title, is revised to read:

3
4 **5-04.2(2)B Using HMA Additives**

5 The Contractor may, at the Contractor’s discretion, elect to use additives that reduce the
6 optimum mixing temperature or serve as a compaction aid for producing HMA. Additives
7 include organic additives, chemical additives and foaming processes. The use of
8 Additives is subject to the following:

- 9
- 10 • Do not use additives that reduce the mixing temperature in accordance with
- 11 Section 5-04.3(6) in the production of High RAP/Any RAS mixtures.
- 12
- 13 • Before using additives, obtain the Engineer’s approval using WSDOT Form 350-
- 14 076 to describe the proposed additive and process.
- 15

16 **5-04.3(3)A Mixing Plant**

17 Item number 5 of the first paragraph is revised to read:

- 18
- 19 5. Provide HMA sampling equipment that complies with FOP for AASHTO T 168:
- 20
- 21 • Use a mechanical sampling device accepted by the Engineer, or
- 22
- 23 • Platforms or devices to enable sampling from the truck transport without entering
- 24 the truck transport for sampling HMA.
- 25

26 **5-04.3(4) Preparation of Existing Paved Surfaces**

27 The first sentence of the fourth paragraph is revised to read:

28
29 Unless otherwise allowed by the Engineer, use cationic emulsified asphalt CSS-1, CSS-
30 1h, or Performance Graded (PG) asphalt for tack coat.

31
32 **5-04.3(6) Mixing**

33 The first paragraph is revised to read:

34
35 The asphalt supplier shall introduce recycling agent and anti-stripping additive, in the
36 amount designated on the QPL for the mix design, into the asphalt binder prior to
37 shipment to the asphalt mixing plant.

38
39 The seventh paragraph is revised to read:

40
41 Upon discharge from the mixer, ensure that the temperature of the HMA does not exceed
42 the optimum mixing temperature shown on the accepted Mix Design Report by more than
43 25°F, or as allowed by the Engineer. When an additive is included in the manufacture of
44 HMA, do not heat the additive (at any stage of production including in binder storage
45 tanks) to a temperature higher than the maximum recommended by the manufacturer of
46 the additive.

47
48 **5-04.3(7) Spreading and Finishing**

49 The last row of the table is revised to read:

50 $\frac{3}{8}$ inch	0.25 feet	0.30 feet
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51

1 **5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA**

2 The following new paragraph is inserted after the first paragraph:

3

4 The Contracting Agency’s combined aggregate bulk specific gravity (Gsb) blend as shown
5 on the HMA Mix Design will be used for VMA calculations until the Contractor submits a
6 written request for a Gsb test. The new Gsb will be used in the VMA calculations for HMA
7 from the date the Engineer receives the written request for a Gsb retest. The Contractor
8 may request aggregate specific gravity (Gsb) testing be performed by the Contracting
9 Agency twice per project. The Gsb blend of the combined stockpiles will be used to
10 calculate voids in mineral aggregate (VMA) of any HMA produced after the new Gsb is
11 determined.

12

13 **5-04.3(9)A1 Test Section – When Required, When to Stop**

14 The following new row is inserted after the second row in Table 9:

15

VMA	Minimum PF_i of 0.95 based on the criteria in Section 5-04.3(9)B4 ²	None ⁴
-----	--	-------------------

16

17 **5-04.3(9)A2 Test Section – Evaluating the HMA Mixture in a Test Section**

18 In Table 9a, the test property “Gradation, Asphalt Binder, and V_a ” is revised to read “Gradation,
19 Asphalt Binder, VMA, and V_a ”

20

21 In Table 9a, the first column of the third row is revised to read:

22

Aggregates: Sand Equivalent Uncompacted Void Content Fracture

23

24 **5-04.3(9)B3 Mixture Statistical Evaluation – Acceptance Testing**

25 In Table 11, “ V_a ” is revised to read “VMA and V_a ”

26

27 **5-04.3(9)B5 Mixture Statistical Evaluation – Composite Pay Factors (CPF)**

28 The following new row is inserted above the last row in Table 12:

29

Voids in Mineral Aggregate (VMA)	2
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30

31 **5-04.3(9)B7 Mixture Statistical Evaluation – Retests**

32 The second to last sentence is revised to read:

33

34 The sample will be tested for a complete gradation analysis, asphalt binder content, VMA
35 and V_a , and the results of the retest will be used for the acceptance of the HMA mixture
36 in place of the original mixture subplot sample test results.

37

38 **5-04.3(10)A HMA Compaction – General Compaction Requirements**

39 The last paragraph is revised to read:

40

1 On bridge decks and on roadway approaches within five feet of a bridge/back of pavement
2 seat, rollers shall not be operated in a vibratory mode, defined as a mode in which the
3 drum vibrates vertically. However, unless otherwise noted on the plans, rollers may be
4 operated in an oscillatory mode, defined as a mode in which the drum vibrates in the
5 horizontal direction only.
6

7 **5-04.3(10)C1 HMA Compaction Statistical Evaluation – Lots and Sublots**

8 The bulleted item in the fourth paragraph is revised to read:
9

- 10 • For a compaction lot in progress with a compaction CPF less than 0.75 using an LSL
11 = 91.5, a new compaction lot will begin at the Contractor’s request after the Engineer
12 is satisfied that material conforming to the Specifications can be produced. See also
13 Section 5-04.3(11)F.
14

15 **5-04.3(10)C2 HMA Compaction Statistical Evaluation – Acceptance Testing**

16 In the table, “WSDOT FOP for AASHTO T 355” is revised to read “FOP for AASHTO T 355”.
17

18 **5-04.3(10)C3 HMA Statistical Compaction – Price Adjustments**

19 In the first paragraph, “WSDOT FOP for AASHTO T 355” is revised to read “FOP for AASHTO
20 T 355”.
21

22 The first sentence in the second paragraph is revised to read:
23

24 For each HMA compaction lot (that is accepted by Statistical Evaluation) which does not
25 meet the criteria in the preceding paragraph, the compaction lot shall be evaluated in
26 accordance with Section 1-06.2(2)D5 to determine the appropriate Composite Pay Factor
27 (CPF).
28

29 The last two paragraphs are revised to read:
30

31 Determine the Compaction Price Adjustment (CPA) from the table below, selecting the
32 equation for CPA that corresponds to the value of CPF determined above.
33

Calculating HMA Compaction Price Adjustment (CPA)	
Value of CPF	Equation for Calculating CPA
When CPF > 1.00	$CPA = [1.00 \times (CPF - 1.00)] \times Q \times UP$
When CPF = 1.00	CPA = \$0
When CPF < 1.0	$CPA = [0.60 \times (CPF - 1.00)] \times Q \times UP$

34 Where

35 CPA = Compaction Price Adjustment for the compaction lot (\$)

36 CPF = Composite Pay Factor for the compaction lot (maximum is 1.05)

37 Q = Quantity in the compaction lot (tons)

38 UP = Unit price of the HMA in the compaction lot (\$/ton)
39
40

41 **5-04.3(10)C4 HMA Statistical Compaction – Requests for Retesting**

42 The first sentence is revised to read:
43

44 For a compaction subplot that has been tested with a nuclear density gauge that did not
45 meet the minimum of 91.5 percent of the theoretical maximum density in a compaction

1 lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor
2 may request that a core, taken at the same location as the nuclear density test, be used
3 for determination of the relative density of the compaction subplot.
4

5 **5-04.3(13) Surface Smoothness**

6 The second to last paragraph is revised to read:
7

8 When concrete pavement is to be placed on HMA, the surface tolerance of the HMA shall
9 be such that no surface elevation lies above the Plan grade minus the specified Plan
10 depth of concrete pavement. Prior to placing the concrete pavement, bring any such
11 irregularities to the required tolerance by grinding or other means allowed by the Engineer.
12

13 **5-04.5 Payment**

14 The paragraph following the Bid item "Crack Sealing-LF", per linear foot is revised to read:
15

16 The unit Contract price per linear foot for "Crack Sealing-LF" shall be full payment for all
17 costs incurred to perform the Work described in Section 5-04.3(4)A.
18

19 **Section 5-05, Cement Concrete Pavement**

20 **April 1, 2019**

21 **5-05.1 Description**

22 In the first paragraph, "portland cement concrete" is revised to read "cement concrete".
23

24 **5-05.2 Materials**

25 In the first paragraph, the reference to "Portland Cement" is revised to read:
26

27 Cement 9-01
28

29 In the first paragraph, the section reference for Concrete Patching Material is revised to read
30 "9-20.1".
31

32 The second paragraph is revised to read:
33

34 Cementitious materials are considered to be the following: portland cement, blended
35 hydraulic cement, fly ash, ground granulated blast furnace slag and microsilica fume.
36

37 **5-05.3(1) Concrete Mix Design for Paving**

38 The table title in item number 4 is revised to read **Concrete Batch Weights**.
39

40 In item 4a, "Portland Cement" is revised to read "Cement".
41

42 **5-05.3(3)E Smoothness Testing Equipment**

43 This section is revised to read:
44

45 Inertial profilers shall meet all requirements of AASHTO M 328 and be certified in
46 accordance with AASHTO R 56 within the preceding 12 months.
47

48 The inertial profiler operator shall be certified as required by AASHTO R 56 within three
49 years preceding profile measurement.
50

1 Equipment or operator certification by other states or a profiler certification facility will be
2 accepted provided the certification meets the requirements of AASHTO R 56.
3 Documentation verifying certification by another state shall be submitted to the Engineer
4 a minimum of 14 calendar days prior to profile measurement. Equipment certification
5 documentation shall include the information required by part 8.5 and 8.6 of AASHTO R
6 56. Operator documentation shall include a statement from the certifying state that
7 indicates the operator is certified to operate the inertial profiler to be used on the project.
8 The decision whether another state's certification meets the requirements of AASHTO R
9 56 shall be vested entirely in the Engineer.

10

11 **5-05.3(4) Measuring and Batching Materials**

12 Item number 2 is revised to read:

13

14 2. **Batching Materials** – On all projects requiring more than 2,500 cubic yards of
15 concrete for paving, the batching plant shall be equipped to proportion aggregates
16 and cement by weight by means of automatic and interlocked proportioning devices
17 of accepted type.

18

19 **5-05.3(4)A Acceptance of Portland Cement Concrete Pavement**

20 This section's title is revised to read:

21

22 **Acceptance of Portland Cement or Blended Hydraulic Cement Concrete** 23 **Pavement**

24

25 The first sentence is revised to read:

26

27 Acceptance of portland cement or blended hydraulic cement concrete pavement shall be
28 as provided under statistical or nonstatistical acceptance.

29

30 **5-05.3(7) Placing, Spreading, and Compacting Concrete**

31 This section's content is deleted.

32

33 **5-05.3(10) Tie Bars and Corrosion Resistant Dowel Bars**

34 The first sentence of the last paragraph is revised to read:

35

36 The tie bar holes shall be clean before grouting.

37

38 **5-05.3(12) Surface Smoothness**

39 This section is revised to read:

40

41 Pavement surface smoothness for this project will include International Roughness Index
42 (IRI) testing. The Contractor shall perform IRI testing on each through lane, climbing lane,
43 and passing lane, greater than 0.25 mile in length and these lanes will be subject to
44 incentive/disincentive adjustments. Ride quality will be evaluated using the Mean
45 Roughness Index (MRI) calculated by averaging the IRI data for the left and right wheel
46 path within the section.

47

48 Ramps, shoulders and tapers will not be included in MRI testing for pavement
49 smoothness and will not be subject to incentive adjustments. All Work is subject to parallel
50 and transverse 10-foot straightedge requirements, corrective work and disincentive
51 adjustments.

52

1 Operate the inertial profiler in accordance with AASHTO R 57. Collect two longitudinal
2 traces, one in each wheel path. Collect profile data after completion of all concrete paving
3 on the project in a continuous pass including areas excluded from pay adjustments.
4 Provide notice to the Engineer a minimum of seven calendar days prior to testing.

5
6 Within 30 calendar days after the Contractor's testing, the Engineer may perform
7 verification testing. If the verification testing shows a difference in MRI greater than the
8 percentages shown in Table 2 of AASHTO R 54 the following resolution process will be
9 followed:

- 10
11 1. The profiles, equipment and procedures will be evaluated to determine the
12 cause of the difference.
- 13
14 2. If the cause of the discrepancy cannot be resolved the pavement shall be
15 retested with both profilers at a mutually agreed time. The two profilers will test
16 the section within 30 minutes of each other. If the retest shows a difference in
17 MRI equal or greater than the percentages shown in Table 2 of AASHTO R 54
18 the Engineer's test results will be used to establish pay adjustments.

19
20 Surface smoothness of travel lanes not subject to MRI testing will be measured with a 10-
21 foot straightedge no later than 5:00 p.m. of the day following the placing of the concrete.
22 The completed surface of the wearing course shall not vary more than $\frac{1}{8}$ inch from the
23 lower edge of a 10-foot straightedge placed on the surface parallel to the centerline.

24
25 Smoothness perpendicular to the centerline will be measured with a 10-foot straightedge
26 across all lanes with the same cross slope, including shoulders when composed of
27 cement concrete pavement. The overlapping 10-foot straightedge measurement shall be
28 discontinued at a point 6 inches from the most extreme outside edge of the finished
29 cement concrete pavement. The completed surface of the wearing course shall not vary
30 more than $\frac{1}{4}$ inch from the lower edge of a 10-foot straightedge placed on the surface
31 perpendicular to the centerline. Any deviations in excess of the above tolerances shall be
32 corrected.

33
34 The Contractor shall evaluate profiles for acceptance, incentive payments, disincentive
35 payments, or corrective action using the current version of ProVAL and provide the results
36 including the profile data in unfiltered electronic Engineering Research Division (ERD) file
37 format to the Engineer within 2 calendar days of completing testing each section of
38 pavement. If the profile data files are created using an export option in the manufacturer's
39 software where filter settings can be specified, use the filter settings that were used to
40 create data files for certification. Analyze the entire profile. Exclude any areas specifically
41 identified in the Contract. Exclude from the analysis the first 100 feet after the start of the
42 paving operations and last 100 feet prior to the end of the paving operation, the first 100
43 feet on either side of bridge Structures and bridge approach slab. Report the MRI results
44 in inches per mile for each 52.8 foot section and horizontal distance measurements in
45 project stationing to the nearest foot. Include pay adjustments in the results. The Engineer
46 will verify the analysis.

47
48 Corrective work for pavement smoothness may be taken by the Contractor prior to MRI
49 testing. After completion of the MRI testing the Contractor shall measure the smoothness
50 of each 52.8-foot section with an MRI greater than 125 inches per mile with a 10-foot
51 straightedge within 14 calendar days or as allowed by the Engineer. The Contractor shall
52 identify all locations that require corrective work and provide the straight edge

1 measurements at each location that exceeds the allowable limit to the Engineer. If all
2 measurements in a 52.8-foot section comply with smoothness requirements, the
3 Contractor shall provide the maximum measurement to the Engineer and a statement that
4 corrective work is not required. Unless allowed by the Engineer, corrective work shall be
5 taken by the Contractor for pavement identified by the Contractor or Engineer that does
6 not meet the following requirements:
7

- 8 1. The completed surface shall be of uniform texture, smooth, uniform as to crown
9 and grade, and free from defects of all kinds.
- 10 2. The completed surface shall not vary more than $\frac{1}{8}$ inch from the lower edge of
11 a 10-foot straightedge placed on the surface parallel to the centerline.
- 12 3. The completed surface shall vary not more than $\frac{1}{4}$ inch in 10 feet from the rate
13 of transverse slope shown in the Plans.
14
15
16

17 All corrective work shall be completed at no additional expense, including traffic control,
18 to the Contracting Agency. Corrective work shall not begin until the concrete has reached
19 its design strength unless allowed by the Engineer. Pavement shall be repaired by one or
20 more of the following methods:
21

- 22 1. Diamond grinding; repairs shall not reduce pavement thickness by more than $\frac{1}{4}$
23 inch less than the thickness shown in the Plans. When required by the Engineer,
24 the Contractor shall verify the thickness of the concrete pavement by coring.
25 Thickness reduction due to corrective work will not be included in thickness
26 measurements for calculating the Thickness Deficiency in Section 5-05.5(1)A.
27
- 28 2. Removal and replacement of the cement concrete pavement.
- 29 3. By other method allowed by the Engineer.
30
31

32 For repairs following MRI testing the repaired area shall be checked by the Contractor
33 with a 10-foot straightedge to ensure it no longer requires corrective work. With
34 concurrence of the Engineer an inertial profiler may be used in place of the 10-foot straight
35 edge.
36

37 If correction of the roadway as listed above either will not or does not produce satisfactory
38 results as to smoothness or serviceability the Engineer may accept the completed
39 pavement and a credit will be calculated in accordance with Section 5-05.5. The credit
40 will be in addition to the price adjustment for MRI. Under these circumstances, the
41 decision whether to accept the completed pavement or to require corrective work as
42 described above shall be vested entirely in the Engineer.
43

44 **5-05.3(22) Repair of Defective Pavement Slabs**

45 The last sentence of the fourth paragraph is revised to read:
46

47 All sandblasting residue shall be removed.
48

49 **5-05.4 Measurement**

50 Item number 3 of the second paragraph is revised to read:
51

1 3. The depth shall be determined in accordance with Section 5-05.5(1). The depth
2 utilized to calculate the volume shall not exceed the Plan depth plus 0.04 feet.
3

4 The third paragraph is revised to read:
5

6 The volume of cement concrete pavement in each thickness lot shall equal the measured
7 length × width × thickness measurement.
8

9 The last paragraph is revised to read:
10

11 The calculation for cement concrete compliance adjustment is the volume of concrete
12 represented by the CPF and the Thickness deficiency adjustment.
13

14 **5-05.5 Payment**

15 The paragraph following the Bid item “Cement Conc. Pavement”, per cubic yard is
16 supplemented with the following:
17

18 All costs associated with performing the magnetic pulse induction thickness testing shall
19 be included in the unit Contract price per cubic yard for “Cement Conc. Pavement”.
20

21 The Bid item “Ride Smoothness Compliance Adjustment”, by calculation, and the paragraph
22 following this bid item are revised to read:
23

24 “Ride Smoothness Compliance Adjustment”, by calculation.
25

26 Smoothness Compliance Adjustments will be based on the requirements in Section 5-
27 05.3(12) and the following calculations:
28

29 1. Final MRI acceptance and incentive/disincentive payments for pavement
30 smoothness will be calculated as the average of the ten 52.8-foot sections in
31 each 528 feet in accordance with the price adjustment schedule.
32

33 a. For sections of a lane that are a minimum of 52.8 feet and less than 528
34 feet, the price adjustment will be calculated using the average of the 52.8
35 foot MRI values and the price adjustment prorated for the length of the
36 section.
37

38 b. MRI values per 52.8-feet that were measured prior to corrective work will
39 be included in the 528 foot price adjustment for sections with corrective
40 work.
41

42 2. In addition to the price adjustment for MRI a smoothness compliance adjustment
43 will be calculated in the sum of minus \$1000.00 for each and every section of
44 single traffic lane 52.8 feet in length in that does not meet the 10-foot straight
45 edge requirements in Section 5-05.3(12) after corrective Work.
46

Price Adjustment Schedule

MRI for each 528 ft. section	Pay Adjustment Schedule
in. / mi.	\$ / 0.10 mi.
< 30	2400
30	2400

31	2320
32	2240
33	2160
34	2080
35	2000
36	1920
37	1840
38	1760
39	1680
40	1600
41	1520
42	1440
43	1360
44	1280
45	1200
46	1120
47	1040
48	960
49	880
50	800
51	720
52	640
53	560
54	480
55	400
56	320
57	240
58	160
59	80
60	0
61	0
62	0
63	0
64	0
65	0
66	0
67	0
68	0
69	0
70	0
71	0
72	0
73	0
74	0
75	0
76	-80
77	-160
78	-240
79	-320
80	-400

81	-480
82	-560
83	-640
84	-720
85	-800
86	-880
87	-960
88	-1040
89	-1120
90	-1200
91	-1280
92	-1360
93	-1440
94	-1520
95	-1600
96	-1680
97	-1760
98	-1840
99	-1920
100	-2000
101	-2080
102	-2160
103	-2240
104	-2320
105	-2400
106	-2480
107	-2560
108	-2640
109	-2720
110	-2800
111	-2880
112	-2960
113	-3040
114	-3120
115	-3200
116	-3280
117	-3360
118	-3440
119	-3520
120	-3600
121	-3680
122	-3760
123	-3840
124	-3920
≥125	-4000

- 1
- 2 The bid item "Portland Cement Concrete Compliance Adjustment", by calculation, and the
- 3 paragraph following this bid item are revised to read:
- 4
- 5 "Cement Concrete Compliance Adjustment", by calculation.

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Payment for "Cement Concrete Compliance Adjustment" will be calculated by multiplying the unit Contract price for the cement concrete pavement, times the volume for adjustment, times the percent of adjustment determined from the calculated CPF and the Deficiency Adjustment listed in Section 5-05.5(1)A.

5-05.5(1) Pavement Thickness

This section is revised to read:

Cement concrete pavement shall be constructed in accordance with the thickness requirements in the Plans and Specifications. Tolerances allowed for Subgrade construction and other provisions, which may affect thickness, shall not be construed to modify such thickness requirements.

Thickness measurements in each lane paved shall comply with the following:

Thickness Testing of Cement Concrete Pavement	
Thickness Lot Size	15 panels maximum
Thickness test location determined by	Engineer will select testing locations in accordance with WSDOT TM 716 method B.
Sample method	AASHTO T 359
Sample preparation performed by	Contractor provides, places, and secures disks in the presence of the Engineer ¹
Measurement method	AASHTO T 359
Thickness measurement performed by	Contractor, in the presence of the Engineer ²
¹ Reflectors shall be located at within 0.5 feet of the center of the panel. The Contractor shall supply a sufficient number of 300 mm-diameter round reflectors meeting the requirements of AASHTO T 359 to accomplish the required testing. ² The Contractor shall provide all equipment and materials needed to perform the testing.	

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22

Thickness measurements shall be rounded to the nearest 0.01 foot.

Each thickness test location where the pavement thickness is deficient by more than 0.04 foot, shall be subject to price reduction or corrective action as shown in Table 2.

Table 2 Thickness Deficiency	
0.04' < Thickness Deficiency ≤ 0.06'	10
0.06' < Thickness deficiency ≤ 0.08'	25
Thickness deficiency > 0.08'	Remove and replace the panels or the panels may be accepted with no payment at the discretion of the Engineer.

23

1 The price reduction shall be computed by multiplying the percent price reduction in Table
2 2 by the unit Contract price by the volume of pavement represented by the thickness test
3 lot.

4
5 Additional cores may be taken by the Contractor to determine the limits of an area that
6 has a thickness deficiency greater than 0.04 feet. Cores shall be taken at the approximate
7 center of the panel. Only the panels within the limits of the deficiency area as determined
8 by the cores will be subject to a price reduction or corrective action. The cores shall be
9 taken in the presence of the Engineer and delivered to the Engineer for measurement. All
10 costs for the additional cores including filling the core holes with patching material meeting
11 the requirements of Section 9-20 will be the responsibility of the Contractor.

12
13 **5-05.5(1)A Thickness Deficiency of 0.05 Foot or Less**

14 This section, including title, is revised to read:

15
16 **5-05.5(1)A Vacant**

17
18 **5-05.5(1)B Thickness Deficiency of More Than 0.05 Foot**

19 This section, including title, is revised to read:

20
21 **5-05.5(1)B Vacant**

22
23 **Section 6-01, General Requirements for Structures**
24 **January 7, 2019**

25 This section is supplemented with the following new subsections:

26
27 **6-01.16 Repair of Defective Work**

28 **6-01.16(1) General**

29 When using repair procedures that are described elsewhere in the Contract
30 Documents, the Working Drawing submittal requirements of this Section shall not
31 apply to those repairs unless noted otherwise.

32
33 Repair procedures for defective Work shall be submitted as Type 2 Working
34 Drawings. Type 2E Working Drawings shall be submitted when required by the
35 Engineer. As an alternative to submitting Type 2 or 2E Working Drawings, defective
36 Work within the limits of applicability of a pre-approved repair procedure may be
37 repaired using that procedure. Repairs using a pre-approved repair procedure shall
38 be submitted as a Type 1 Working Drawing.

39
40 Pre-approved repair procedures shall consist of the following:

- 41
42
- 43 • The procedures listed in Section 6-01.16(2)
 - 44 • For precast concrete, repair procedures in the annual plant approval
45 process documents that have been approved for use by the Contracting
46 Agency.
- 47

48 All Working Drawings for repair procedures shall include:

- 49
- 50 • A description of the defective Work including location, extent and pictures
- 51

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- Materials to be used in the repair. Repairs using manufactured products shall include written manufacturer recommendations for intended uses of the product, surface preparation, mixing, aggregate extension (if applicable), ambient and surface temperature limits, placement methods, finishing and curing.
- Construction procedures
- Plan details of the area to be repaired
- Calculations for Type 2E Working Drawings

Material manufacturer's instructions and recommendations shall supersede any conflicting requirements in pre-approved repair procedures.

The Engineer shall be notified prior to performing any repair procedure and shall be given an opportunity to inspect the repair work being performed.

6-01.16(2) Pre-Approved Repair Procedures
6-01.16(2)A Concrete Spalls and Poor Consolidation (Rock Pockets, Honeycombs, Voids, etc.)

This repair shall be limited to the following areas:

- Areas that are not on top Roadway surfaces (with or without an overlay) including but not limited to concrete bridge decks, bridge approach slabs or cement concrete pavement
- Areas that are not underwater
- Areas that are not on precast barrier, except for the bottom 4 inches (but not to exceed 1 inch above blockouts)
- Areas that do not affect structural adequacy as determined by the Engineer.

The repair procedure is as follows:

1. Remove all loose and unsound concrete. Impact breakers shall not exceed 15 pounds in weight when removing concrete adjacent to reinforcement or other embedments and shall not exceed 30 pounds in weight otherwise. Operate impact breakers at angles less than 45 degrees as measured from the surface of the concrete to the tool and moving away from the edge of the defective Work. Concrete shall be completely removed from exposed surfaces of existing steel reinforcing bars. If half or more of the circumference of any steel reinforcing bar is exposed, if the reinforcing bar is loose or if the bond to existing concrete is poor then concrete shall be removed at least 3/4 inch behind the reinforcing bar. Do not damage any existing reinforcement. Stop work and allow the Engineer to inspect the repair area after removing all loose and unsound concrete. Submit a modified repair procedure when required by the Engineer.

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2. Square the edges of the repair area by cutting an edge perpendicular to the concrete surface around the repair area. The geometry of the repair perimeter shall minimize the edge length and shall be rectangular with perpendicular edges, avoiding reentrant corners. The depth of the cut shall be a minimum of 3/4 inch, but shall be reduced if necessary to avoid damaging any reinforcement. For repairs on vertical surfaces, the top edge shall slope up toward the front at a 1-vertical-to-3-horizontal slope.
3. Remove concrete within the repair area to a depth at least matching the cut depth at the edges. Large variations in the depth of removal within short distances shall be avoided. Roughen the concrete surface. The concrete surface should be roughened to at least Concrete Surface Profile (CSP) 5 in accordance with ICRI Guideline No. 310.2R, unless a different CSP is recommended by the patching material manufacturer.
4. Inspect the concrete repair surface for delaminations, debonding, microcracking and voids using hammer tapping or a chain drag. Remove any additional loose or unsound concrete in accordance with steps 1 through 3.
5. Select a patching material in accordance with Section 9-20.2 that is appropriate for the repair location and thickness. The concrete patching material shall be pumpable or self-consolidating as required for the type of placement that suits the repair. The patching material shall have a minimum compressive strength at least equal to the specified compressive strength of the concrete.
6. Prepare the concrete surface and reinforcing steel in accordance with the patching material manufacturer's recommendations. At a minimum, clean the concrete surfaces (including perimeter edges) and reinforcing steel using oil-free abrasive blasting or high-pressure (minimum 5,000 psi) water blasting. All dirt, dust, loose particles, rust, laitance, oil, film, microcracked/bruised concrete or foreign material of any sort shall be removed. Damage to the epoxy coating on steel reinforcing bars shall be repaired in accordance with Section 6-02.3(24)H.
7. Construct forms if necessary, such as for patching vertical or overhead surfaces or where patching extends to the edge or corner of a placement.
8. When recommended by the patching material manufacturer, saturate the concrete in the repair area and remove any free water at the concrete surface to obtain a saturated surface dry (SSD) substrate. When recommended by the patching material manufacturer, apply a primer, scrub coat or bonding agent to the existing surfaces. Epoxy bonding agents, if used, shall be Type II or Type V in accordance with Section 9-26.1.
9. Place and consolidate the patching material in accordance with the manufacturer's recommendations. Work the material firmly into all

- 1 surfaces of the repair area with sufficient pressure to achieve proper
2 bond to the concrete.
3
4 10. The patching material shall be textured, cured and finished in
5 accordance with the patching material manufacturer's
6 recommendations and/or the requirements for the repaired component.
7 Protect the newly placed patch from vibration in accordance with
8 Section 6-02.3(6)D.
9
10 11. When the completed repair does not match the existing concrete color
11 and will be visible to the public, a sand and cement mixture that is color
12 matched to the existing concrete shall be rubbed, brushed, or applied
13 to the surface of the patching material and the concrete.
14

15 **6-01.10 Utilities Supported by or Attached to Bridges**

16 In the third paragraph, "Federal Standard 595" is revised to read "SAE AMS Standard 595".
17

18 **6-01.12 Final Cleanup**

19 The second sentence of the first paragraph is revised to read:

20

21 Structure decks shall be clean.

22

23 The second paragraph is deleted.

24

25 **Section 6-02, Concrete Structures**

26 **April 1, 2019**

27 **6-02.1 Description**

28 The first sentence is revised to read:

29

30 This Work consists of the construction of all Structures (and their parts) made of portland
31 cement or blended hydraulic cement concrete with or without reinforcement, including
32 bridge approach slabs.
33

34 **6-02.2 Materials**

35 In the first paragraph, the references to "Portland Cement" and "Aggregates for Portland
36 Cement Concrete" are revised to read:

37

38	Cement	9-01
39	Aggregates for Concrete	9-03.1

40

41 The reference to metakaolin is deleted.

42

43 **6-02.3(2) Proportioning Materials**

44 The second paragraph is revised to read:

45

46 Unless otherwise specified, the Contractor shall use Type I or II portland cement or
47 blended hydraulic cement in all concrete as defined in Section 9-01.2(1).
48

49 The last sentence of the fifth paragraph is revised to read:
50

1 With the Engineer's written concurrence, microsilica fume may be used in all
2 classifications of Class 4000, Class 3000, and commercial concrete and is limited to a
3 maximum of 10 percent of the cementitious material.
4

5 **6-02.3(2)A Contractor Mix Design**

6 The last sentence of the last paragraph is revised to read:
7

8 For all other concrete, air content shall be a minimum of 4.5 percent and a maximum of
9 7.5 percent for all concrete placed above the finished ground line unless noted otherwise.
10

11 **6-02.3(2)A1 Contractor Mix Design for Concrete Class 4000D**

12 Item number 5 of the first paragraph is deleted.
13

14 Item number 6 of the first paragraph (after the preceding Amendment is applied) is
15 renumbered to 5.
16

17 **6-02.3(2)B Commercial Concrete**

18 The second paragraph is revised to read:
19

20 Where concrete Class 3000 is specified for items such as, culvert headwalls, plugging
21 culverts, concrete pipe collars, pipe anchors, monument cases, Type PPB, PS, I, FB and
22 RM signal standards, pedestals, cabinet bases, guardrail anchors, fence post footings,
23 sidewalks, concrete curbs, curbs and gutters, and gutters, the Contractor may use
24 commercial concrete. If commercial concrete is used for sidewalks, concrete curbs, curbs
25 and gutters, and gutters, it shall have a minimum cementitious material content of 564
26 pounds per cubic yard of concrete, shall be air entrained, and the tolerances of Section
27 6-02.3(5)C shall apply.
28

29 **6-02.3(4) Ready-Mix Concrete**

30 The first sentence of the first paragraph is revised to read:
31

32 All concrete, except lean concrete, shall be batched in a prequalified manual, semi-
33 automatic, or automatic plant as described in Section 6-02.3(4)A.
34

35 **6-02.3(4)D Temperature and Time For Placement**

36 The following is inserted after the first sentence of the first paragraph:
37

38 The upper temperature limit for placement for Class 4000D concrete may be increased
39 to a maximum of 80°F if allowed by the Engineer.
40

41 **6-02.3(5)C Conformance to Mix Design**

42 Item number 1 of the second paragraph is revised to read:
43

44 1. Cement weight plus 5 percent or minus 1 percent of that specified in the mix design.
45

46 **6-02.3(6)A1 Hot Weather Protection**

47 The first paragraph is revised to read:
48

49 The Contractor shall provide concrete within the specified temperature limits. Cooling of
50 the coarse aggregate piles by sprinkling with water is permitted provided the moisture
51 content is monitored, the mixing water is adjusted for the free water in the aggregate and
52 the coarse aggregate is removed from at least 1 foot above the bottom of the pile.

1 Sprinkling of fine aggregate piles with water is not allowed. Refrigerating mixing water or
2 replacing all or part of the mixing water with crushed ice is permitted, provided the ice is
3 completely melted by placing time.
4

5 The second sentence of the second paragraph is revised to read:
6

7 These surfaces include forms, reinforcing steel, steel beam flanges, and any others that
8 touch the concrete.
9

10 **6-02.3(7) Vacant**

11 This section, including title, is revised to read:
12

13 **6-02.3(7) Tolerances**

14 Unless noted otherwise, concrete construction tolerances shall be in accordance with this
15 section. Tolerances in this section do not apply to cement concrete pavement.
16

17 Horizontal deviation of roadway crown points, cross-slope break points, and curb, barrier
18 or railing edges from alignment or work line: ± 1.0 inch
19

20 Deviation from plane: ± 0.5 inch in 10 feet
21

22 Deviation from plane for roadway surfaces: ± 0.25 inch in 10 feet
23

24 Deviation from plumb or specified batter: ± 0.5 inch in 10 feet, but not to exceed a total of
25 ± 1.5 inches
26

27 Vertical deviation from profile grade for roadway surfaces: ± 1 inch
28

29 Vertical deviation of top surfaces (except roadway surfaces): ± 0.75 inch
30

31 Thickness of bridge decks and other structural slabs not at grade: ± 0.25 inch
32

33 Length, width and thickness of elements such as columns, beams, crossbeams,
34 diaphragms, corbels, piers, abutments and walls, including dimensions to construction
35 joints in initial placements: $+0.5$ inch, -0.25 inch
36

37 Length, width and thickness of spread footing foundations: $+2$ inches, -0.5 inch
38

39 Horizontal location of the as-placed edge of spread footing foundations: The greater of
40 $\pm 2\%$ of the horizontal dimension of the foundation perpendicular to the edge and ± 0.5
41 inch. However, the tolerance shall not exceed ± 2 inches.
42

43 Location of opening, insert or embedded item at concrete surface: ± 0.5 inch
44

45 Cross-sectional dimensions of opening: ± 0.5 inch
46

47 Bridge deck, bridge approach slab, and bridge traffic barrier expansion joint gaps with a
48 specified temperature range, measured at a stable temperature: ± 0.25 inch
49

50 Horizontal deviation of centerline of bearing pad, oak block or other bearing assembly:
51 ± 0.125 inch
52

1 Horizontal deviation of centerline of supported element from centerline of bearing pad,
2 oak block or other bearing assembly ±0.25 inch

3
4 Vertical deviation of top of bearing pad, oak block or other bearing assembly: ±0.125 inch

5
6 **6-02.3(10)C Finishing Equipment**

7 The first paragraph is revised to read:

8
9 The finishing machine shall be self-propelled and be capable of forward and reverse
10 movement under positive control. The finishing machine shall be equipped with augers
11 and a rotating cylindrical single or double drum screed. The finishing machine shall have
12 the necessary adjustments to produce the required cross section, line, and grade. The
13 finishing machine shall be capable of raising the screeds, augers, and any other parts of
14 the finishing mechanical operation to clear the screeded surface, and returning to the
15 specified grade under positive control. Unless otherwise allowed by the Engineer, a
16 finishing machine manufacturer technical representative shall be on site to assist the first
17 use of the machine on the Contract.

18
19 The first sentence of the second paragraph is revised to read:

20
21 For bridge deck widening of 20 feet or less, and for bridge approach slabs, or where
22 jobsite conditions do not allow the use of the conventional configuration finishing
23 machines, or modified conventional machines as described above; the Contractor may
24 submit a Type 2 Working Drawing proposing the use of a hand-operated motorized power
25 screed such as a "Texas" or "Bunyan" screed.

26
27 **6-02.3(10)D4 Monitoring Bridge Deck Concrete Temperature After Placement**

28 This section, including title, is revised to read:

29
30 **6-02.3(10)D4 Vacant**

31
32 **6-02.3(10)D5 Bridge Deck Concrete Finishing and Texturing**

33 In the third subparagraph of the first paragraph, the last sentence is revised to read:

34
35 The Contractor shall texture the bridge deck surface to within 3-inches minimum and 24-
36 inches maximum of the edge of concrete at expansion joints, within 1-foot minimum and
37 2-foot maximum of the curb line, and within 3-inches minimum and 9-inches maximum of
38 the perimeter of bridge drain assemblies.

39
40 **6-02.3(10)F Bridge Approach Slab Orientation and Anchors**

41 The second to last paragraph is revised to read:

42
43 The compression seal shall be a 2½ inch wide gland and shall conform to Section 9-
44 04.1(4).

45
46 The last paragraph is deleted.

47
48 **6-02.3(13)A Strip Seal Expansion Joint System**

49 In item number 3 of the third paragraph, "Federal Standard 595" is revised to read "SAE AMS
50 Standard 595".

51

1 **6-02.3(13)B Compression Seal Expansion Joint System**

2 The first paragraph is revised to read:

3

4 Compression seal glands shall conform to Section 9-04.1(4) and be sized as shown in
5 the Plans.

6

7 **6-02.3(14)C Pigmented Sealer for Concrete Surfaces**

8 This section is supplemented with the following new paragraph:

9

10 Pigmented Sealer Materials shall be a product listed in the current WSDOT Qualified
11 Products List (QPL). If the pigmented sealer material is not listed in the current WSDOT
12 QPL, a sample shall be submitted to the State Materials Laboratory in Tumwater for
13 evaluation and acceptance in accordance with Section 9-08.3.

14

15 **6-02.3(20) Grout for Anchor Bolts and Bridge Bearings**

16 The second, third and fourth paragraphs are revised to read:

17

18 Grout shall be a workable mix with a viscosity that is suitable for the intended application.
19 Grout shall not be placed outside of the manufacturer recommended range of thickness.
20 The Contractor shall receive concurrence from the Engineer before using the grout.

21

22 Field grout cubes and cylinders shall be fabricated and tested in accordance with Section
23 9-20.3 when requested by the Engineer, but not less than once per bridge pier or once
24 per day.

25

26 Before placing grout, the substrate on which it is to be placed shall be prepared as
27 recommended by the manufacturer to ensure proper bonding. The grout shall be cured
28 as recommended by the manufacturer. The grout may be loaded when a minimum of
29 4,000 psi compressive strength is attained.

30

31 The fifth paragraph is deleted.

32

33 **6-02.3(23) Opening to Traffic**

34 This section is supplemented with the following new paragraph:

35

36 After curing bridge approach slabs in accordance with Section 6-02.3(11), the
37 bridge approach slabs may be opened to traffic when a minimum compressive strength
38 of 2,500 psi is achieved.

39

40 **6-02.3(24)C Placing and Fastening**

41 This section is revised to read:

42

43 The Contractor shall position reinforcing steel as the Plans require and shall ensure that
44 the steel is set within specified tolerances. Adjustments to reinforcing details outside of
45 specified tolerances to avoid interferences and for other purposes are acceptable when
46 approved by the Engineer.

47

48 When spacing between bars is 1 foot or more, they shall be tied at all intersections. When
49 spacing is less than 1 foot, every other intersection shall be tied. If the Plans require
50 bundled bars, they shall be tied together with wires at least every 6 feet. All epoxy-coated
51 bars in the top mat of the bridge deck shall be tied at all intersections, however they may
52 be tied at alternate intersections when spacing is less than 1 foot in each direction and

1 they are supported by continuous supports meeting all other requirements of supports for
2 epoxy-coated bars. Other epoxy-coated bars shall also be tied at all intersections, but
3 shall be tied at alternate intersections when spacing is less than 1 foot in each direction.
4 Wire used for tying epoxy-coated reinforcing steel shall be plastic coated. **Tack welding**
5 **is not permitted on reinforcing steel.**
6

7 Abrupt bends in the steel are permitted only when one steel member bends around
8 another. Vertical stirrups shall pass around main reinforcement or be firmly attached to it.
9

10 For slip-formed concrete, the reinforcing steel bars shall be tied at all intersections and
11 cross braced to keep the cage from moving during concrete placement. Cross bracing
12 shall be with additional reinforcing steel. Cross bracing shall be placed both longitudinally
13 and transversely.
14

15 After reinforcing steel bars are placed in a traffic or pedestrian barrier and prior to slip-
16 form concrete placement, the Contractor shall check clearances and reinforcing steel bar
17 placement. This check shall be accomplished by using a template or by operating the slip-
18 form machine over the entire length of the traffic or pedestrian barrier. All clearance and
19 reinforcing steel bar placement deficiencies shall be corrected by the Contractor before
20 slip-form concrete placement.
21

22 Precast concrete supports (or other accepted devices) shall be used to maintain the
23 concrete coverage required by the Plans. The precast concrete supports shall:
24

- 25 1. Have a bearing surface measuring not greater than 2 inches in either dimension, and
- 26 2. Have a compressive strength equal to or greater than that of the concrete in which
27 they are embedded.
28

29 In slabs, each precast concrete support shall have either: (1) a grooved top that will hold
30 the reinforcing bar in place, or (2) an embedded wire that protrudes and is tied to the
31 reinforcing steel. If this wire is used around epoxy-coated bars, it shall be coated with
32 plastic.
33

34 Precast concrete supports may be accepted based on a Manufacturer's Certificate of
35 Compliance.
36

37 In lieu of precast concrete supports, the Contractor may use metal or all-plastic supports
38 to hold uncoated bars. Any surface of a metal support that will not be covered by at least
39 ½ inch of concrete shall be one of the following:
40

- 41 1. Hot-dip galvanized after fabrication in keeping with AASHTO M232 Class D;
42
- 43 2. Coated with plastic firmly bonded to the metal. This plastic shall be at least 3/32
44 inch thick where it touches the form and shall not react chemically with the
45 concrete when tested in the State Materials Laboratory. The plastic shall not
46 shatter or crack at or above -5°F and shall not deform enough to expose the
47 metal at or below 200°F; or
48
- 49 3. Stainless steel that meet the requirements of ASTM A493, Type 302. Stainless
50 steel chair supports are not required to be galvanized or plastic coated.
51
52

1 In lieu of precast concrete supports, epoxy-coated reinforcing bars may be supported by
2 one of the following:
3
4 1. Metal supports coated entirely with a dielectric material such as epoxy or plastic,
5
6 2. Other epoxy-coated reinforcing bars, or
7
8 3. All-plastic supports.
9
10 Damaged coatings on metal bar supports shall be repaired prior to placing concrete.
11
12 All-plastic supports shall be lightweight, non-porous, and chemically inert in concrete. All-
13 plastic supports shall have rounded seatings, shall not deform under load during normal
14 temperatures, and shall not shatter or crack under impact loading in cold weather. All-
15 plastic supports shall be placed at spacings greater than 1 foot along the bar and shall
16 have at least 25 percent of their gross place area perforated to compensate for the
17 difference in the coefficient of thermal expansion between plastic and concrete. The
18 shape and configuration of all-plastic supports shall permit complete concrete
19 consolidation in and around the support.
20
21 A “mat” is two adjacent and perpendicular layers of reinforcing steel. In bridge decks, top
22 and bottom mats shall be supported adequately enough to hold both in their proper
23 positions. If bar supports directly support, or are directly supported on No. 4 bars, they
24 shall be spaced at not more than 3-foot intervals (or not more than 4-foot intervals for
25 bars No. 5 and larger). Wire ties to girder stirrups shall not be considered as supports. To
26 provide a rigid mat, the Contractor shall add other supports and tie wires to the top mat
27 as needed.
28
29 Unless noted otherwise, the minimum concrete cover for main reinforcing bars shall be:
30
31 3 inches to a concrete surface deposited against earth without intervening forms.
32
33 2½ inches to the top surface of a concrete bridge deck or bridge approach slab.
34
35 2 inches to a concrete surface when not specified otherwise in this section or in the
36 Contract documents.
37
38 1½ inches to a concrete barrier or curb surface.
39
40 Except for top cover in bridge decks and bridge approach slabs, minimum concrete cover
41 to ties and stirrups may be reduced by ½ inch but shall not be less than 1 inch. Minimum
42 concrete cover shall also be provided to the outermost part of mechanical splices and
43 headed steel reinforcing bars.
44
45 Reinforcing steel bar location, concrete cover and clearance shall not vary more than the
46 following tolerances from what is specified in the Contract documents:
47
48 Reinforcing bar location for members 12 inches or less in thickness: ±0.25 inch
49
50 Reinforcing bar location for members greater than 12 inches in thickness: ±0.375
51 inch
52

1 Reinforcing bar location for bars placed at equal spacing within a plane: the greater
2 of either ± 1 inch or ± 1 bar diameter within the plane. The total number of bars shall
3 not be fewer than that specified.
4

5 The clearance between reinforcement shall not be less than the greater of the bar
6 diameter or 1 inch for unbundled bars. For bundled bars, the clearance between
7 bundles shall not be less than the greater of 1 inch or a bar diameter derived from
8 the equivalent total area of all bars in the bundle.
9

10 Longitudinal location of bends and ends of bars: ± 1 inch

11 Embedded length of bars and length of bar lap splices:

12
13 No. 3 through No. 11: -1 inch

14
15 No. 14 through No. 18: -2 inches
16
17

18 Concrete cover measured perpendicular to concrete surface (except for the top
19 surface of bridge decks, bridge approach slabs and other roadway surfaces): ± 0.25
20 inch
21

22 Concrete cover measured perpendicular to concrete surface for the top surface of
23 bridge decks, bridge approach slabs and other roadway surfaces: +0.25 inch, -0 inch
24

25 Before placing any concrete, the Contractor shall:

- 26
- 27 1. Clean all mortar from reinforcement, and
 - 28
 - 29 2. Obtain the Engineer's permission to place concrete after the Engineer has
30 inspected the placement of the reinforcing steel. (Any concrete placed without
31 the Engineer's permission shall be rejected and removed.)
32

33 **6-02.3(25)H Finishing**

34 The last paragraph is revised to read:

35
36 The Contractor may repair defects in prestressed concrete girders in accordance with
37 Section 6-01.16.
38

39 **6-02.3(25)I Fabrication Tolerances**

40 Item number 12 of the first paragraph is revised to read:

41
42 12. Stirrup Projection from Top of Girder:

43
44 Wide flange thin deck and slab girders: $\pm \frac{1}{2}$ inch

45
46 All other girders: $\pm \frac{3}{4}$ inch
47

48 **6-02.3(27) Concrete for Precast Units**

49 The last sentence of the first paragraph is revised to read:

50
51 Type III portland cement or blended hydraulic cement is permitted to be used in precast
52 concrete units.

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6-02.3(28)B Casting

In the second paragraph, the reference to Section 6-02.3(25)B is revised to read Section 6-02.3(25)C.

6-02.3(28)D Contractors Control Strength

In the first paragraph, "WSDOT FOP for AASHTO T 23" is revised to read "FOP for AASHTO T 23".

6-02.3(28)E Finishing

This section is supplemented with the following:

The Contractor may repair defects in precast panels in accordance with Section 6-01.16.

**Section 6-03, Steel Structures
January 7, 2019**

6-03.2 Materials

In the first paragraph, the material reference for Paints is revised to read:

Paints and Related Materials 9-08

6-03.3(25)A3 Ultrasonic Inspection

The first paragraph (up until the colon) is revised to read:

Complete penetration groove welds on plates 5/16 inch and thicker in the following welded assemblies or Structures shall be 100 percent ultrasonically inspected:

6-03.3(33) Bolted Connections

The first paragraph is supplemented with the following:

After final tightening of the fastener components, the threads of the bolts shall at a minimum be flush with the end of the nut.

The following is inserted after the third sentence of the fourth paragraph:

When galvanized bolts are specified, tension-control galvanized bolts are not permitted.

**Section 6-05, Piling
January 2, 2018**

6-05.3(9)A Pile Driving Equipment Approval

The fourth sentence of the second paragraph is revised to read:

For prestressed concrete piles, the allowable driving stress in kips per square inch shall be $0.095 \cdot \sqrt{f'_c}$ plus prestress in tension, and $0.85f'_c$ minus prestress in compression, where f'_c is the concrete compressive strength in kips per square inch.

1 **Section 6-07, Painting**

2 **January 7, 2019**

3 **6-07.1 Description**

4 The first sentence is revised to read:

5

6 This work consists of containment, surface preparation, shielding adjacent areas from
7 work, testing and disposing of debris, furnishing and applying paint, and cleaning up after
8 painting is completed.

9

10 **6-07.2 Materials**

11 The material reference for Paint is revised to read:

12

13 Paint and Related Materials 9-08

14

15 **6-07.3(1)A Work Force Qualifications for Shop Application of Paint**

16 This section is supplemented with the following new sentence:

17

18 The work force may be accepted based on the approved facility.

19

20 **6-07.3(1)B Work Force Qualifications for Field Application of Paint**

21 The first two paragraphs are revised to read:

22

23 The Contractor preparing the surface and applying the paint shall be certified under
24 SSPC-QP 1 or NACE International Institute Contractor Accreditation Program (NIICAP)
25 AS 1.

26

27 The Contractor removing and otherwise disturbing existing paint containing lead and
28 other hazardous materials shall be certified under SSPC-QP 2, Category A or NIICAP AS
29 2.

30

31 The third paragraph (up until the colon) is revised to read:

32

33 In lieu of the above SSPC or NIICAP certifications, the Contractor performing the specified
34 work shall complete both of the following actions:

35

36 Item number 2 of the third paragraph is revised to read:

37

38 2. The Contractor's quality control inspector(s) for the project shall be NACE-certified
39 CIP Level 3 or SSPC Protective Coating Inspector (PCI) Level 3.

40

41 **6-07.3(2) Submittals**

42 The first paragraph is supplemented with the following:

43

44 Each component of the plan shall identify the specification section it represents.

45

46 **6-07.3(2)B Contractor's Quality Control Program Submittal Component**

47 The numbered list in the first paragraph is revised to read:

48

49 1. Description of the inspection procedures, tools, techniques and the acceptance
50 criteria for all phases of work.

- 1
- 2 2. Procedure for implementation of corrective action for non-conformance work.
- 3
- 4 3. The paint system manufacturer's recommended methods of preventing defects.
- 5
- 6 4. The Contractor's frequency of quality control inspection for each phase of work.
- 7
- 8 5. Example of each completed form(s) of the daily quality control report used to
- 9 document the inspection work and tests performed by the Contractor's quality control
- 10 personnel.

11

12 **6-07.3(2)C Paint System Manufacturer and Paint System Information Submittal**

13 **Component**

14 Item number 1 is revised to read:

- 15
- 16 1. Product data sheets and Safety Data Sheets (SDS) on the paint materials, paint
 - 17 preparation, and paint application, as specified by the paint manufacturer, including:
 - 18
 - 19 a. All application instructions, including the mixing and thinning directions.
 - 20 b. Recommended spray nozzles and pressures.
 - 21 c. Minimum and maximum drying time between coats.
 - 22 d. Restrictions on temperature and humidity.
 - 23 e. Repair procedures for shop and field applied coatings.
 - 24 f. Maximum dry film thickness for each coat.
 - 25 g. Minimum wet film thickness for each coat to achieve the specified minimum dry
 - 26 film thickness.
- 27
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- 33

34 **6-07.3(2)D Hazardous Waste Containment, Collection, Testing, and Disposal**

35 **Submittal Component**

36 The first paragraph (up until the colon) is revised to read:

37

38 The hazardous waste containment, collection, testing, and disposal shall meet all Federal

39 and State requirements, and the submittal component of the painting plan shall include

40 the following:

41

42 **6-07.3(2)E Cleaning and Surface Preparation Submittal Component**

43 Item 1(b) of the first paragraph is revised to read::

- 44
- 45 b. Type, manufacturer, and brand of abrasive blast material and all associated
 - 46 additives, including Safety Data Sheets (SDS).
- 47

48 **6-07.3(3)B Quality Control and Quality Assurance for Field Application of Paint**

49 The last sentence of the first paragraph (excluding the numbered list) is revised to read:

50

51 The Contractor's quality control operations shall include a minimum monitoring and

52 documenting the following for each working day:

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Item number 1 in the fourth paragraph is revised to read:

1. Environmental conditions for painting in accordance with ASTM E 337.

Item number 4 in the fourth paragraph is revised to read:

4. Pictorial of surface preparation guides in accordance with SSPC-VIS 1, 3, 4, and 5.

Item number 5 in the fourth paragraph is revised to read:

5. Surface profile by Keanne-Tator comparator in accordance with ASTM D 4417 and SSPC PA17.

6-07.3(4) Paint System Manufacturer’s Technical Representative

This section is revised to read:

The paint system manufacturer’s representative shall be present at the jobsite for the pre-painting conference and for the first day of paint application, and shall be available to the Contractor and Contracting Agency for consultation for the full project duration.

6-07.3(5) Pre-Painting Conference

The second paragraph is revised to read:

If the Contractor’s key personnel change between any work operations, an additional conference shall be held if requested by the Engineer.

6-07.3(6)A Paint Containers

In item number 2 of the first paragraph, “Federal Standard 595” is revised to read “SAE AMS Standard 595”.

6-07.3(6)B Paint Storage

Item number 2 of the second paragraph is revised to read:

2. The Contractor shall monitor and document daily the paint material storage facility with a high-low recording thermometer device.

6-07.3(7) Paint Sampling and Testing

The first two paragraphs are revised to read:

The Contractor shall provide the Engineer 1 quart of each paint representing each lot. Samples shall be accompanied with a Safety Data Sheet.

If the quantity of paint required for each component of the paint system for the entire project is 20 gallons or less, then the paint system components will be accepted as specified in Section 9-08.1(7).

6-07.3(8)A Paint Film Thickness Measurement Gages

The first paragraph is revised to read:

1 Paint dry film thickness measurements shall be performed with either a Type 1 pull-off
2 gage or a Type 2 electronic gage as specified in SSPC Paint Application Specification No.
3 2, Procedure for Determining Conformance to Dry Coating Thickness Requirements.
4

5 **6-07.3(9) Painting New Steel Structures**

6 The last sentence of the second paragraph is revised to read:

7
8 Welded shear connectors are not required to painted.
9

10 The last paragraph is revised to read:

11
12 Temporary attachments or supports for scaffolding, containment or forms shall not
13 damage the paint system.
14

15 **6-07.3(9)A Paint System**

16 The first paragraph is revised to read:

17
18 The paint system applied to new steel surfaces shall consist of the following:

19
20 Option 1 (component based paint system):

21
22 Primer Coat – Inorganic Zinc Rich 9-08.1(2)C
23 Intermediate Coat – Moisture Cured Polyurethane 9-08.1(2)G
24 Intermediate Stripe Coat – Moisture Cured Polyurethane 9-08.1(2)G
25 Top Coat – Moisture Cured Polyurethane 9-08.1(2)H
26

27 Option 2 (performance based paint system):

28
29 Primer Coat – Inorganic Zinc Rich 9-08.1(2)M
30 Intermediate Coat – Epoxy 9-08.1(2)M
31 Intermediate Stripe Coat – Epoxy 9-08.1(2)M
32 Top Coat – Polyurethane 9-08.1(2)M
33

34 The following new paragraph is inserted after the first paragraph:

35
36 Paints and related materials shall be products listed in the current WSDOT Qualified
37 Products List (QPL). Component based paint systems shall be listed on the QPL in the
38 applicable sections of Section 9-08. Performance based systems shall be listed on the
39 current Northeast Protective Coatings Committee (NEPCOAT) Qualified Products List "A"
40 as listed on the WSDOT QPL in Section 9-08.1(2)M. If the paint and related materials for
41 the component based system is not listed in the current WSDOT QPL, a sample shall be
42 submitted to the State Materials Laboratory in Tumwater for evaluation and acceptance
43 in accordance with Section 9-08.
44

45 **6-07.3(9)C Mixing and Thinning Paint**

46 This section is revised to read:

47
48 The Contractor shall thoroughly mix paint in accordance with the manufacturer's written
49 recommendations and by mechanical means to ensure a uniform and lump free
50 composition. Paint shall not be mixed by means of air stream bubbling or boxing. Paint
51 shall be mixed in the original containers and mixing shall continue until all pigment or
52 metallic powder is in suspension. Care shall be taken to ensure that the solid material that

1 has settled to the bottom of the container is thoroughly dispersed. After mixing, the
2 Contractor shall inspect the paint for uniformity and to ensure that no unmixed pigment or
3 lumps are present.
4

5 Catalysts, curing agents, hardeners, initiators, or dry metallic powders that are packaged
6 separately may be added to the base paint in accordance with the paint manufacturer's
7 written recommendations and only after the paint is thoroughly mixed to achieve a uniform
8 mixture with all particles wetted. The Contractor shall then add the proper volume of
9 curing agent to the correct volume of base and mix thoroughly. The mixture shall be used
10 within the pot life specified by the manufacturer. Unused portions shall be discarded at
11 the end of each work day. Accelerants are not permitted except as allowed by the
12 Engineer.
13

14 The Contractor shall not add additional thinner at the application site except as allowed
15 by the Engineer. The amount and type of thinner, if allowed, shall conform to the
16 manufacturer's specifications. If recommended by the manufacturer and allowed by the
17 Engineer, a measuring cup shall be used for the addition of thinner to any paint with
18 graduations in ounces. No un-measured addition of thinner to paint will be allowed. Any
19 paint found to be thinned by unacceptable methods will be rejected.
20

21 When recommended by the manufacturer, the Contractor shall constantly agitate paint
22 during application by use of paint pots equipped with mechanical agitators.
23

24 The Contractor shall strain all paint after mixing to remove undesirable matter, but without
25 removing the pigment or metallic powder.
26

27 Paint shall be stored and mixed in a secure, contained location to eliminate the potential
28 for spills into State waters and onto the ground and highway surfaces.
29

30 **6-07.3(9)D Coating Thickness**

31 This section is revised to read:
32

33 Dry film thickness shall be measured in accordance with SSPC Paint Application
34 Specification No. 2, *Procedure for Determining Conformance to Dry Coating Thickness*
35 *Requirements*.
36

37 The minimum dry film thickness of the primer coat shall not be less than 2.5 mils.
38

39 The minimum dry film thickness of each coat (combination of intermediate and
40 intermediate stripe, and top) shall be not less than 3.0 mils.
41

42 The dry film thickness of each coat shall not be thicker than the paint manufacturer's
43 recommended maximum thickness.
44

45 The minimum wet film thickness of each coat shall be specified by the paint manufacturer
46 to achieve the minimum dry film thickness.
47

48 Film thickness, wet and dry, will be measured by gages conforming to Section 6-07.3(8)A.
49

50 Wet measurements will be taken immediately after the paint is applied in accordance with
51 ASTM D4414. Dry measurements will be taken after the coating is dry and hard in
52 accordance with SSPC Paint Application Specification No. 2.

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Each painter shall be equipped with wet film thickness gages and shall be responsible for performing frequent checks of the paint film thickness throughout application.

Coating thickness measurements may be made by the Engineer after the application of each coat and before the application of the succeeding coat. In addition, the Engineer may inspect for uniform and complete coverage and appearance. One hundred percent of all thickness measurements shall meet or exceed the minimum wet film thickness. In areas where wet film thickness measurements are impractical, dry film thickness measurements may be made. If a question arises about an individual coat's thickness or coverage, it may be verified by the use of a Tooke gage in accordance with ASTM D4138.

If the specified number of coats does not produce a combined dry film thickness of at least the sum of the thicknesses required per coat, if an individual coat does not meet the minimum thickness, or if visual inspection shows incomplete coverage, the coating system will be rejected and the Contractor shall discontinue painting and surface preparation operations and shall submit a Type 2 Working Drawing of the repair proposal. The repair proposal shall include documentation demonstrating the cause of the less-than-minimum thickness, along with physical test results, as necessary, and modifications to Work methods to prevent similar results. The Contractor shall not resume painting or surface preparation operations until receiving the Engineer's acceptance of the completed repair.

6-07.3(9)E Surface Temperature Requirements Prior to Application of Paint

This section, including title, is revised to read:

6-07.3(9)E Environmental Condition Requirements Prior to Application of Paint

Paint shall be applied only during periods when:

1. Air and steel temperatures are in accordance with the paint manufacturer's recommendations but in no case less than 35°F nor greater than 115°F.
2. Steel surface temperature is a minimum of 5°F above the dew point.
3. Steel surface is not wet.
4. Relative humidity is within the manufacturer's recommended range.
5. The anticipated ambient temperature will remain above 35°F or the manufacturer's minimum temperature, whichever is greater, during the paint drying and curing period.

Application will not be allowed if conditions are not favorable for proper application and performance of the paint.

Paint shall not be applied when weather conditions are unfavorable to proper curing. If a paint system manufacturer's recommendations allow for application of a paint under environmental conditions other than those specified, the Contractor shall submit a Type 2 Working Drawing consisting of a letter from the paint manufacturer specifying the environmental conditions under which the paint can be applied. Application of paint under

1 environmental conditions other than those specified in this section will not be allowed
2 without the Engineer's concurrence.

3
4
5 **6-07.3(9)F Shop Surface Cleaning and Preparation**

6 The last sentence is revised to read:

7
8 The entire steel surface to be painted, including surfaces specified in Section 6-07.3(9)G
9 to receive a mist coat of primer, shall be cleaned to a near white condition in accordance
10 with SSPC-SP 10, *Near-white Metal Blast Cleaning*, and shall be in this condition
11 immediately prior to paint application.

12
13 **6-07.3(9)G Application of Shop Primer Coat**

14 The first paragraph is supplemented with the following:

15
16 Repairs of the shop primer coat shall be prepared in accordance with the painting plan.
17 Shop primer coat repair paint shall be selected from the approved component based or
18 performance based paint system in accordance with Section 6-07.3(10)H.

19
20 **6-07.3(9)H Containment for Field Coating**

21 This section is revised to read:

22
23 The Contractor shall use a containment system in accordance with Section 6-07.3(10)A
24 for surface preparation and prime coating of all uncoated areas remaining, including bolts,
25 nuts, washers, and splice plates.

26
27 During painting operations of the intermediate, stripe and top coats the Contractor shall
28 furnish, install, and maintain drip tarps below the areas to be painted to contain all spilled
29 paint, buckets, brushes, and other deleterious material, and prevent such materials from
30 reaching the environment below or adjacent to the structure being painted. Drip tarps
31 shall be absorbent material and hung to minimize puddling. The Contractor shall evaluate
32 the project-specific conditions to determine the specific type and extent of containment
33 needed to control the paint emissions and shall submit a containment plan in accordance
34 with Section 6-07.3(2).

35
36 **6-07.3(9)I Application of Field Coatings**

37 This section is revised to read:

38
39 An on-site supervisor shall be present for each work shift at the bridge site.

40
41 Upon completion of erection Work, all uncoated or damaged areas remaining, including
42 bolts, nuts, washers, and splice plates, shall be prepared in accordance with Section 6-
43 07.3(9)F, followed by a field primer coat of a zinc-rich primer and final coats of paint
44 selected from the approved component or performance based paint system in
45 accordance with Section 6-07.3(10)H. . The intermediate, intermediate stripe, and top
46 coats shall be applied in accordance with the manufacturer's written recommendations.

47
48 Upon completion of erection Work, welds for steel column jackets may be prepared in
49 accordance with SSPC-SP 15, Commercial Grade Power Tool Cleaning.

50

1 The minimum drying time between coats shall be as shown in the product data sheets,
2 but not less than 12 hours. The Contractor shall determine whether the paint has cured
3 sufficiently for proper application of succeeding coats.
4

5 The maximum time between intermediate and top coats shall be in accordance with the
6 manufacturer's written recommendations. If the maximum time between coats is
7 exceeded, all newly coated surfaces shall be prepared to SSPC-SP 7, *Brush-off Blast
8 Cleaning*, and shall be repainted with the same paint that was cleaned, at no additional
9 cost to the Contracting Agency.
10

11 Each coat shall be applied in a uniform layer, completely covering the preceding coat.
12 The Contractor shall correct runs, sags, skips, or other deficiencies before application of
13 succeeding coats. Such corrective work may require re-cleaning, application of additional
14 paint, or other means as determined by the Engineer, at no additional cost to the
15 Contracting Agency.
16

17 Dry film thickness measurements will be made in accordance with Section 6-07.3(9)D.
18

19 All paint damage that occurs shall be repaired in accordance with the manufacturer's
20 written recommendations. On bare areas or areas of insufficient primer thickness, the
21 repair shall include field-applied zinc-rich primer and the final coats of paint selected from
22 the approved component or performance based paint system in accordance with Section
23 6-07.3(10)H. On areas where the primer is at least equal to the minimum required dry film
24 thickness, the repair shall include the application of the final two coats of the paint system.
25 All paint repair operations shall be performed by the Contractor at no additional cost or
26 time to the Contracting Agency.
27

28 **6-07.3(10)A Containment**

29 The first sentence of the third paragraph is revised to read:
30

31 Emissions shall be assessed by Visible Emission Observations (Method A) in SSPC
32 Technology Update No. 7, *Conducting Ambient Air, Soil, and Water Sampling of Surface
33 Preparation and Paint Disturbance Activities*, Section 6.2 and shall be limited to the Level
34 A Acceptance Criteria Option Level 0 Emissions standard.
35

36 **6-07.3(10)D Surface Preparation Prior to Overcoat Painting**

37 The first paragraph is revised to read:
38

39 The Contractor shall remove any visible oil, grease, and road tar in accordance with
40 SSPC-SP 1, *Solvent Cleaning*.
41

42 The second paragraph is revised to read:
43

44 Following any preparation by SSPC-SP1, all steel surfaces to be painted shall be
45 prepared in accordance with SSPC-SP 7, *Brush-off Blast Cleaning*. Surfaces inaccessible
46 to brush-off blast shall be prepared in accordance with SSPC-SP 3, *Power Tool Cleaning*,
47 as allowed by the Engineer.
48

49 The first sentence of the third paragraph is revised to read:
50

51 Following brush-off blast cleaning, the Contractor shall perform spot abrasive blast
52 cleaning in accordance with SSPC-SP 6, *Commercial Blast Cleaning*.

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The second to last sentence of the third paragraph is revised to read:

For small areas, as allowed by the Engineer, the Contractor may substitute cleaning in accordance with SSPC-SP 15, *Commercial Grade Power Tool Cleaning*.

6-07.3(10)G Treatment of Pack and Rust Gaps

The second paragraph is revised to read:

Pack rust forming a gap between steel surfaces of 1/16 to 1/4 inch shall be cleaned to a depth of at least one half of the gap width. The gaps shall be cleaned and prepared in accordance with SSPC-SP6. The cleaned gap shall be treated with rust penetrating sealer, prime coated, and then caulked to form a watertight seal along the top edge and the two sides of the steel pieces involved, using the rust penetrating sealer and caulk as accepted by the Engineer. The bottom edge or lowest edge of the steel pieces involved shall not be caulked.

The third paragraph is supplemented with the following:

Caulk shall be a single-component urethane sealant conforming to Section 9-08.7.

The fifth paragraph is revised to read:

At locations where gaps between steel surfaces exceed 1/4 inch, the Contractor shall clean and prepare the gap in accordance SSPC-SP6, apply the rust penetrating sealer, apply the prime coat, and then fill the gap with foam backer rod material as accepted by the Engineer. The foam backer rod material shall be of sufficient diameter to fill the crevice or gap. The Contractor shall apply caulk over the foam backer rod material to form a watertight seal.

This section is supplemented with the following new paragraph:

Caulk and backer rod, if needed, shall be placed prior to applying the top coat. The Contractor, with the concurrence of the Engineer, may apply the rust penetrating sealer after application of the prime coat provided the primer is removed in the areas to be sealed. The areas to be sealed shall be re-cleaned and re-prepared in accordance with SSPC-SP6.

6-07.3(10)H Paint System

The first paragraph is revised to read:

The paint system applied to existing steel surfaces shall consist of the following five-coat system:

Option 1 (component based system):

Primer Coat – Zinc-filled Moisture Cured Polyurethane	9-08.1(2)F
Primer Stripe Coat - Moisture Cured Polyurethane	9-08.1(2)F
Intermediate Coat - Moisture Cured Polyurethane	9-08.1(2)G
Intermediate Stripe Coat - Moisture Cured Polyurethane	9-08.1(2)G
Top Coat - Moisture Cured Polyurethane	9-08.1(2)H

1	Option 2 (performance based system):	
2		
3	Primer Coat – Zinc-rich Epoxy	9-08.1(2)N
4	Primer Stripe Coat – Epoxy	9-08.1(2)N
5	Intermediate Coat – Epoxy	9-08.1(2)N
6	Intermediate Stripe Coat – Epoxy	9-08.1(2)N
7	Top Coat – Polyurethane	9-08.1(2)N
8		

9 The following new paragraph is inserted after the first paragraph:

10
 11 Paints and related materials shall be a product listed in the current WSDOT Qualified
 12 Products List (QPL). Component based paint systems shall be listed on the QPL in the
 13 applicable sections of Section 9-08. Performance based systems shall be listed on the
 14 current Northeast Protective Coatings Committee (NEPCOAT) Qualified Products List “B”
 15 as listed on the WSDOT QPL in Section 9-08.1(2)N. If the paint and related material for
 16 the component based system is not listed in the current WSDOT QPL, a sample shall be
 17 submitted to the State Materials Laboratory in Tumwater for evaluation and acceptance
 18 in accordance with Section 9-08.

19
 20 **6-07.3(10)J Mixing and Thinning Paint**

21 This section is revised to read:

22
 23 Mixing and thinning paint shall be in accordance with Section 6-07.3(9)C.

24
 25 **6-07.3(10)K Coating Thickness**

26 This section is revised to read:

27
 28 Coating thickness shall be in accordance with Section 6-07.3(9)D except the minimum
 29 dry film thickness of each coat (combination of primer and primer stripe, combination of
 30 intermediate and intermediate stripe, and top) shall not be less than 3.0 mils.

31
 32 **6-07.3(10)L Environmental Condition Requirements Prior to Application of
 33 Paint**

34 This section is revised to read:

35
 36 Environmental conditions shall be in accordance with Section 6-07.3(9)E.

37
 38 **6-07.3(10)M Steel Surface Condition Requirements Prior to Application of
 39 Paint**

40 The third paragraph is revised to read:

41
 42 Edges of existing paint shall be feathered in accordance with SSPC-PA 1, *Shop, Field,
 43 and Maintenance Coating of Metals*, Note 15.20.

44
 45 **6-07.3(10)N Field Coating Application Methods**

46 The third sentence is revised to read:

47
 48 The Contractor may apply stripe coat paint using spray or brush but shall follow spray
 49 application using a brush to ensure complete coverage around structural geometric
 50 irregularities and to push the paint into gaps between existing steel surfaces and around
 51 rivets and bolts.

52

1 **6-07.3(10)O Applying Field Coatings**

2 The second to last paragraph is revised to read:

3
4 Each application of primer, primer stripe, intermediate, intermediate stripe, and top coat
5 shall be considered as separately applied coats. The Contractor shall not use a preceding
6 or subsequent coat to remedy a deficiency in another coat. The Contractor shall apply the
7 top coat to at least the minimum specified top coat thickness, to provide a uniform
8 appearance and consistent finish coverage.
9

10 **6-07.3(10)P Field Coating Repair**

11 The second sentence is revised to read:

12
13 Repair areas shall be cleaned of all damaged paint and the system reapplied using all
14 coats typical to the paint system and shall meet the minimum coating thickness.
15

16 **6-07.3(11)A Painting of Galvanized Surfaces**

17 This section is revised to read:

18
19 All galvanized surfaces receiving paint shall be prepared for painting in accordance with
20 the ASTM D 6386. The method of preparation shall be brush-off in accordance with
21 SSPC-SP16 *Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel,*
22 *Stainless Steels, and Non-Ferrous Metals* or as otherwise allowed by the Engineer. The
23 Contractor shall not begin painting until receiving the Engineer's acceptance of the
24 prepared galvanized surface. For galvanized bolts used for replacement of deteriorated
25 existing rivets, the Contractor, with the concurrence of the Engineer and after successful
26 demonstration testing, may prepare galvanized surfaces in accordance with SSPC-SP1
27 followed by SSPC-SP2, *Hand Tool Cleaning* or SSPC-SP3, *Power Tool Cleaning*. The
28 demonstration testing shall include adhesion testing of the first coat of paint over
29 galvanized bolts, nuts, and washers or a representative galvanized surface. Adhesion
30 testing shall be performed in accordance with ASTM D 4541 for 600 psi minimum
31 adhesion. A minimum of 3 successful tests shall be performed on the galvanized surface
32 prepared and painted using the same methods and materials to be used on the
33 galvanized bolts, nuts and washers in the field.
34

35 **6-07.3(11)A2 Paint Coat Materials**

36 This section is revised to read:

37
38 The Contractor shall paint the dry surface as follows:

- 39
40 1. The first coat over a galvanized surface shall be an epoxy polyamide conforming
41 to Section 9-08.1(2)E . In the case of galvanized bolts used for replacement of
42 deteriorated existing rivets and for small surface areas less than or equal to one
43 square foot, an intermediate moisture cured polyurethane conforming to Section
44 9-08.1(2)G may be used as a first coat. In both cases the first coat shall be
45 compatible with galvanizing and as recommended by the top coat manufacturer.
46
47 2. The second coat shall be a top coat moisture cured aliphatic polyurethane
48 conforming to Section 9-08.1(2)H or a top coat polyurethane conforming to
49 Section 6-07.3(10)H Option 2 NEPCOAT performance based paint specification
50 compatible with the first coat as recommended by the manufacturer.
51

1 Each coat shall be dry before the next coat is applied. All coats applied in the shop shall
2 be dried hard before shipment.

3
4 **6-07.3(11)B Powder Coating of Galvanized Surfaces**

5 This section is revised to read:

6
7 Powder coating of galvanized surfaces shall consist of the following coats:

- 8
9 1. The first coat shall be an epoxy powder primer coat conforming to Section 9-
10 08.2.
11
12 2. The second coat shall be a polyester finish coat conforming to Section 9-08.2.
13

14 **6-07.3(11)B3 Galvanized Surface Cleaning and Preparation**

15 The first three paragraphs are revised to read:

16
17 Galvanized surfaces receiving the powder coating shall be cleaned and prepared for
18 coating in accordance with ASTM D 7803, and the project-specific powder coating plan.

19
20 Assemblies conforming to the ASTM D 7803 definition for newly galvanized steel shall
21 receive surface smoothing and surface cleaning in accordance with ASTM D 7803,
22 Section 5, and surface preparation in accordance with ASTM D 7803, Section 5.1.3.

23
24 Assemblies conforming to the ASTM D 7803 definition for partially weathered galvanized
25 steel shall be checked and prepared in accordance with ASTM D 7803, Section 6, before
26 then receiving surface smoothing and surface cleaning in accordance with ASTM D 7803,
27 Section 5, and surface preparation in accordance with ASTM D 7803, Section 5.1.3.

28
29 The fourth paragraph (up until the colon) is revised to read:

30
31 Assemblies conforming to the ASTM D 7803 definition for weathered galvanized steel
32 shall be prepared in accordance with ASTM D 7803, Section 7 before then receiving
33 surface smoothing and surface cleaning in accordance with ASTM D 7803, Section 5, and
34 surface preparation in accordance with ASTM D 7803, Section 5.3 except as follows:
35

36 **6-07.3(11)B5 Testing**

37 Item number 4 in the first paragraph is revised to read:

- 38
39 4. Adhesion testing in accordance with ASTM D 4541 for 600 psi minimum adhesion
40 for the complete two-component system.

41
42 The second sentence of the fourth paragraph is revised to read:

43
44 Rejected assemblies shall be repaired or recoated by the Contractor, at no additional
45 expense to the Contracting Agency, in accordance with the powder coating
46 manufacturer's recommendation as detailed in the project-specific powder coating plan,
47 until the assemblies satisfy the acceptance testing requirements.
48

49 **6-07.3(12) Painting Ferry Terminal Structures**

50 This section is revised to read:

51

1 Painting of ferry terminal Structures shall be in accordance with Section 6-07.3 as
2 supplemented below.
3
4 This section is supplemented with the following new subsections:
5
6 **6-07.3(12)A Painting New Steel Ferry Terminal Structures**
7 Painting of new steel Structures shall be in accordance with Section 6-07.3(9) except that
8 all coatings (primer, intermediate, intermediate stripe, and top) shall be applied in the shop
9 with the following exceptions:
10
11 1. Steel surfaces to be field welded.
12
13 2. Steel surfaces to be greased.
14
15 3. The length of piles designated in the Plans not requiring painting.
16
17 The minimum drying time between coats shall be as shown in the product data sheets,
18 but not less than 12 hours. The Contractor shall determine whether the paint has cured
19 sufficiently for proper application of succeeding coats.
20
21 **6-07.3(12)A1 Paint Systems**
22 Paint systems for Structural Steel, which includes vehicle transfer spans and towers,
23 pedestrian overhead loading structures and towers, upland structural steel and other
24 elements as designated in the Special Provisions shall be as specified in Section 6-
25 07.3(9)A.
26
27 Paint systems for Piling, Landing Aids and Life Ladders shall be as specified in the
28 Special Provisions.
29
30 **6-07.3(12)A2 Paint Color**
31 Paint colors shall be as specified in the Special Provisions.
32
33 **6-07.3(12)A3 Coating Thickness**
34 Coating thicknesses shall be as specified in the Special Provisions.
35
36 **6-07.3(12)A4 Application of Field Coatings**
37 An on-site supervisor shall be present for each work shift at the project site.
38
39 Upon completion of erection Work, all uncoated or damaged areas remaining,
40 including bolts, nuts, washers, splice plates, and field welds shall be prepared in
41 accordance with SSPC-SP 1, Solvent Cleaning, followed by SSPC-SP 11, *Power*
42 *Tool Cleaning to Bare Metal*. Surface preparation shall be measured according to
43 SSPC-VIS 3. SSPC-SP 11 shall be performed for a minimum distance of 1 inch from
44 the uncoated or damaged area. In addition, intact shop-applied coating surrounding
45 the area shall be abraded or sanded for a distance of 6 inches out from the properly
46 prepared clean/bare metal areas to provide adequate roughness for application of
47 field coatings. All sanding dust and contamination shall be removed prior to
48 application of field coatings.
49
50 Field applied paint for Structural Steel shall conform to Section 6-07.3(10)H, as
51 applicable. Field applied paint for Piling, Landing Aids and Life Ladders shall be as
52 specified in the Special Provisions.

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For areas above the tidal zone, the minimum drying time between coats shall be as shown in the product data sheets, but not less than 12 hours. For areas within the tidal zone, the minimum drying time between coats shall be as recommended by the paint system manufacturer. The Contractor shall determine whether the paint has cured sufficiently for proper application of succeeding coats.

The maximum time between intermediate and top coats shall be in accordance with the manufacturer's written recommendations. If the maximum time between coats is exceeded, all newly coated surfaces shall be prepared to SSPC-SP 3, *Power Tool Cleaning*, and shall be repainted with the same paint that was cleaned, at no additional cost to the Contracting Agency.

Each coat shall be applied in a uniform layer, completely covering the preceding coat. The Contractor shall correct runs, sags, skips, or other deficiencies before application of succeeding coats. Such corrective work may require re-cleaning, application of additional paint, or other means as determined by the Engineer, at no additional cost to the Contracting Agency.

Surface preparation for underwater locations shall consist of removing all dirt, oil, grease, loose paint, loose rust, and marine growth from the area that is to be repaired. The sound paint surrounding the damaged area shall be roughened to meet the requirements of the manufacturer. Paint for underwater applications shall be as specified in the Special Provisions and shall be applied in accordance with the manufacturer's recommendations.

6-07.3(12)B Painting Existing Steel Ferry Terminal Structures

Painting of existing steel structures shall be in accordance with Section 6-07.3(10) as supplemented by the following.

6-07.3(12)B1 Containment

Containment for full removal shall be in accordance with Section 6-07.3(10)A. Containment for overcoat systems shall be in accordance with all applicable Permits as required in the Special Provisions.

Prior to cleaning the Contractor shall enclose all exposed electrical and mechanical equipment to seal out dust, water, and paint. Non-metallic surfaces shall not be abrasive blasted or painted. Unless otherwise specified, the following metallic surfaces shall not be painted and shall be protected from abrasive blasting and painting:

1. Galvanized and stainless steel surfaces not previously painted,
2. Non-skid surfaces,
3. Unpainted intentionally greased surfaces,
4. Equipment labels, identification plates, tags, etc.,
5. Fire and emergency containers or boxes,

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6. Mechanical hardware such as hoist sheaves, hydraulic cylinders, gear boxes, wire rope, etc.

The Contractor shall submit a Type 2 Working Drawing consisting of materials and equipment used to shield components specified to not be cleaned and painted. The Contractor shall shut off the power prior to working around electrical equipment. The Contractor shall follow the lock-out/tag-out safety provisions of the WAC 296-803 and all other applicable safety standards.

6-07.3(12)B2 Surface Preparation

For applications above high water and within the tidal zone, surface preparation for overcoat painting shall be in accordance with SSPC-SP 1, *Solvent Cleaning*, followed by SSPC-SP 3, *Power Tool Cleaning*. Use of wire brushes is not allowed. After SP 3 cleaning has been completed all surfaces exhibiting coating failure down to the steel substrate, and those exhibiting visible corrosion, shall be prepared down to clean bare steel in accordance with SSPC-SP 15, *Commercial Grade Power Tool Cleaning*. Surface preparation shall be measured according to SSPC-VIS 3. SSPC-SP 15 shall be performed for a minimum distance of 1 inch from the area exhibiting failure or visible corrosion. In addition, intact shop-applied coating surrounding the repair area shall be abraded or sanded for a distance of 6 inches out from the properly prepared clean/bare metal areas to provide adequate roughness for application of repair coatings. All sanding dust and contamination shall be removed prior to application of repair coatings. Surface preparation for full paint removal shall be in accordance with Section 6-07.3(10)E except SSPC-SP 11 will be permitted as detailed in the Contractor's painting plan and as allowed by the Engineer.

Surface preparation for underwater locations shall consist of removing all dirt, oil, grease, loose paint, loose rust, and marine growth from the area that is to be repaired. The sound paint surrounding the damaged area shall be roughened as required by the coating manufacturer.

Removed marine growth may be released to state waters provided the marine growth is not mixed with contaminants (paint, oil, rust, etc.) and it shall not accumulate on the sea bed. All marine growth containing contaminants shall be collected for proper disposal.

Surface preparation for the underside of bridge decks (consisting of either a steel grid system of main bars or tees and a light gauge metal form, in-filled with concrete or a corrugated light gauge metal form, infilled with concrete) shall be in accordance with SSPC-SP 2, *Hand Tool Cleaning* or SSPC-SP 3, *Power Tool Cleaning* with the intent of not causing further damage to the light gauge metal form. Following removal of any pack rust and corroded sections from the underside of the bridge deck, cleaning and flushing to remove salts and prior to applying the primer coat, the Contractor shall seal the entire underside of the deck system with rust-penetrating sealer. Damage to galvanized metal forms and/or grids shall be repaired in accordance with ASTM A 780, with the preferred method of repair using paints containing zinc dust.

6-07.3(12)B3 Paint Systems

Paints systems for Structural Steel, which includes vehicle transfer spans and towers, pedestrian overhead loading structures and towers, upland structural steel

1 and other elements as designated in the Special Provisions shall be as specified in
2 Section 6-07.3(10)H.
3
4 Paint systems for Piling, Landing Aids, Life Ladders, underside of vehicle transfer
5 span bridge decks, non-skid surface treated areas, and anti-graffiti coatings shall be
6 as specified in the Special Provisions.
7
8 **6-07.3(12)B4 Paint Color**
9 Paint colors shall be as specified in the Special Provisions.
10
11 **6-07.3(12)B5 Coating Thickness**
12 Coating thicknesses shall be as specified in the Special Provisions.
13
14 **6-07.3(12)B6 Application of Field Coatings**
15 Application of field coatings shall be in accordance with Section 6-07.3(10)O and
16 Section 6-07.3(12)A2 except for the following:
17
18 1. All coatings applied in the field shall be applied using a brush or roller. Spray
19 application methods may be used if allowed by the Engineer.
20
21 2. Applied coatings shall not be immersed until the coating has been cured as
22 required by the coating manufacturer.
23
24 3. Non-skid surface treatment products shall be applied in accordance with
25 the manufacturer's recommendations.
26
27 4. Anti-graffiti coatings shall be applied in one coat following application of the
28 top coat, where specified in the Plans.
29
30 **6-07.3(14)B Reference Standards**
31 The second standard reference (to SSPC CS 23.00), and its accompanying title, is revised to
32 read:
33
34 SSPC CS 23.00 Specification for the Application of Thermal Spray Coatings
35 (Metallizing) of Aluminum, Zinc, and Their Alloys and
36 Composites for the Corrosion Protection of Steel
37
38 **Section 6-08, Bituminous Surfacing on Structure Decks**
39 **January 7, 2019**
40
41 **6-08.3(7)A Concrete Deck Preparation**
42 The first sentence of the first paragraph is revised to read:
43
44 The Contractor, with the Engineer, shall inspect the exposed concrete deck to establish
45 the extent of bridge deck repair in accordance with Section 6-09.3(6).
46
47 **6-08.3(8)A Structure Deck Preparation**
48 The second sentence of the last paragraph is revised to read:
49
50 Prior to applying the primer or sheet membrane, all dust and loose material shall be
51 removed from the Structure Deck.

1 **Section 6-09, Modified Concrete Overlays**

2 **January 7, 2019**

3 **6-09.3 Construction Requirements**

4 This section is supplemented with the following new subsection:

5

6 **6-09.3(15) Sealing and Texturing Concrete Overlay**

7 After the requirements for checking for bond have been met, all joints and visible cracks
8 shall be filled and sealed with a high molecular weight methacrylate resin (HMWM).
9 Cracks 1/16 inch and greater in width shall receive two applications of HMWM.
10 Immediately following the application of HMWM, the wetted surface shall be coated with
11 sand for abrasive finish.

12

13 After all cracks have been filled and sealed and the HMWM resin has cured, the concrete
14 overlay surface shall receive a longitudinally sawn texture in accordance with Section 6-
15 02.3(10)D5.

16

17 Traffic shall not be permitted on the finished concrete until it has reached a minimum
18 compressive strength of 3,000 psi as verified by rebound number determined in
19 accordance with ASTM C805 and the longitudinally sawn texture is completed.

20

21 **6-09.3(1)B Rotary Milling Machines**

22 This section is revised to read:

23

24 Rotary milling machines used to remove an upper layer of existing concrete overlay, when
25 present, shall have a maximum operating weight of 50,000 pounds and conform to
26 Section 6-08.3(5)B.

27

28 **6-09.3(1)C Hydro-Demolition Machines**

29 The first sentence of this section is revised to read:

30

31 Hydro-demolition machines shall consist of filtering and pumping units operating in
32 conjunction with a remote-controlled robotic device, using high-velocity water jets to
33 remove sound concrete to the nominal scarification depth shown in the Plans with a single
34 pass of the machine, and with the simultaneous removal of deteriorated concrete.

35

36 **6-09.3(1)D Shot Blasting Machines**

37 This section, including title, is revised to read:

38

39 **6-09.3(1)D Vacant**

40

41 **6-09.3(1)E Air Compressor**

42 This section is revised to read:

43

44 Air compressors shall be equipped with oil traps to eliminate oil from being blown onto
45 the bridge deck.

46

47 **6-09.3(1)J Finishing Machine**

48 This section is revised to read:

49

1 The finishing machine shall meet the requirements of Section 6-02.3(10) and the following
2 requirements:

3
4 The finishing machine shall be equipped with augers, followed by an oscillating,
5 vibrating screed, vibrating roller tamper, or a vibrating pan, followed by a rotating
6 cylindrical double drum screed. The vibrating screed, roller tamper or pan shall be of
7 sufficient length and width to properly consolidate the mixture. The vibrating
8 frequency of the vibrating screed, roller tamper or pan shall be variable with positive
9 control.

10
11 **6-09.3(2) Submittals**

12 Item number 1 and 2 are revised to read:

- 13
14 1. A Type 1 Working Drawing consisting of catalog cuts and operating parameters of
15 the hydro-demolition machine selected by the Contractor for use in this project to
16 scarify concrete surfaces.
17
18 2. A Type 1 Working Drawing consisting of catalog cuts, operating parameters, axle
19 loads, and axle spacing of the rotary milling machine (if used to remove an upper
20 layer of existing concrete overlay when present).

21
22 The first sentence of item number 3 is revised to read:

23
24 A Type 2 Working Drawing of the Runoff Water Disposal Plan.

25
26 **6-09.3(5)A General**

27 The first sentence of the fourth paragraph is revised to read:

28
29 All areas of the deck that are inaccessible to the selected scarifying machine shall be
30 scarified to remove the concrete surface matrix to a maximum nominal scarification depth
31 shown in the Plans by a method acceptable to the Engineer.

32
33 This section is supplemented with the following:

34
35 Concrete process water generated by scarifying concrete surface and removing existing
36 concrete overlay operations shall be contained, collected, and disposed of in accordance
37 with Section 5-01.3(11) and Section 6-09.3(5)C, and the Section 6-09.3(2) Runoff Water
38 Disposal Plan.

39
40 **6-09.3(5)B Testing of Hydro-Demolition and Shot Blasting Machines**

41 This section's title is revised to read:

42
43 **Testing of Hydro-Demolition Machines**

44
45 The second paragraph is revised to read:

46
47 In the "sound" area of concrete, the equipment shall be programmed to remove concrete
48 to the nominal scarification depth shown in the Plans with a single pass of the machine.

49
50 **6-09.3(5)D Shot Blasting**

51 This section, including title, is revised to read:

52

1 **6-09.3(5)D Vacant**

2

3 **6-09.3(5)E Rotomilling**

4 This section, including title, is revised to read:

5

6 **6-09.3(5)E Removing Existing Concrete Overlay Layer by Rotomilling**

7 When the Contractor elects to remove the upper layer of existing concrete overlay, when
8 present, by rotomilling prior to final scarifying, the entire concrete surface of the bridge
9 deck shall be milled to remove the surface matrix to the depth specified in the Plans with
10 a tolerance as specified in Section 6-08.3(5)B. The operating parameters of the rotary
11 milling machine shall be monitored in order to prevent the unnecessary removal of
12 concrete below the specified removal depth.

13

14 **6-09.3(6) Further Deck Preparation**

15 The first paragraph is revised to read::

16

17 Once the lane or strip being overlaid has been cleaned of debris from scarifying, the
18 Contractor, with the Engineer, shall perform a visual inspection of the scarified surface.
19 The Contractor shall mark those areas of the existing bridge deck that are authorized by
20 the Engineer for further deck preparation by the Contractor.

21

22 Item number 4 of the second paragraph is deleted.

23

24 The first sentence of the third paragraph is deleted.

25

26 **6-09.3(6)A Equipment for Further Deck Preparation**

27 This section is revised to read:

28

29 Further deck preparation shall be performed using either power driven hand tools
30 conforming to Section 6-09.3(1)A, or hydro-demolition machines conforming to Section
31 6-09.3(1)C.

32

33 **6-09.3(6)B Deck Repair Preparation**

34 The second paragraph is deleted.

35

36 The last sentence of the second paragraph (after the preceding Amendment is applied) is
37 revised to read:

38

39 In no case shall the depth of a sawn vertical cut exceed $\frac{3}{4}$ inch or to the top of the top
40 steel reinforcing bars, whichever is less.

41

42 The first sentence of the third to last paragraph is revised to read:

43

44 Where existing steel reinforcing bars inside deck repair areas show deterioration greater
45 than 20-percent section loss, the Contractor shall furnish and place steel reinforcing bars
46 alongside the deteriorated bars in accordance with the details shown in the Standard
47 Plans.

48

49 The last paragraph is deleted.

50

51 **6-09.3(7) Surface Preparation for Concrete Overlay**

52 The first seven paragraphs are deleted and replaced with the following:

1
2 Following the completion of any required further deck preparation the entire lane or strip
3 being overlaid shall be cleaned to be free from oil and grease, rust and other foreign
4 material that may still be present. These materials shall be removed by detergent-cleaning
5 or other method accepted by the Engineer followed by sandblasting.

6
7 After detergent cleaning and sandblasting is completed, the entire lane or strip being
8 overlaid shall be cleaned in final preparation for placing concrete.

9
10 Hand tool chipping, sandblasting and cleaning in areas adjacent to a lane or strip being
11 cleaned in final preparation for placing concrete shall be discontinued when final
12 preparation is begun. Scarifying and hand tool chipping shall remain suspended until the
13 concrete has been placed and the requirement for curing time has been satisfied.
14 Sandblasting and cleaning shall remain suspended for the first 24 hours of curing time
15 after the completion of concrete placing.

16
17 Scarification, and removal of the upper layer of concrete overlay when present, may
18 proceed during the final cleaning and overlay placement phases of the Work on adjacent
19 portions of the Structure so long as the scarification and concrete overlay removal
20 operations are confined to areas which are a minimum of 100 feet away from the defined
21 limits of the final cleaning or overlay placement in progress. If the scarification and
22 concrete overlay removal impedes or interferes in any way with the final cleaning or
23 overlay placement as determined by the Engineer, the scarification and concrete overlay
24 removal Work shall be terminated immediately and the scarification and concrete overlay
25 removal equipment removed sufficiently away from the area being prepared or overlaid
26 to eliminate the conflict. If the grade is such that water and contaminants from the
27 scarification and concrete overlay removal operation will flow into the area being prepared
28 or overlaid, the scarification and concrete overlay removal operation shall be terminated
29 and shall remain suspended for the first 24 hours of curing time after the completion of
30 concrete placement.

31
32 **6-09.3(11) Placing Concrete Overlay**

33 The first sentence of item number 3 in the fourth paragraph is revised to read:

34
35 Concrete shall not be placed when the temperature of the concrete surface is less than
36 45°F or greater than 75°F, and wind velocity at the construction site is in excess of 10
37 mph.

38
39 **6-09.3(12) Finishing Concrete Overlay**

40 The third paragraph is deleted.

41
42 The last paragraph is deleted.

43
44 **6-09.3(13) Curing Concrete Overlay**

45 The first sentence of the first paragraph is revised to read:

46
47 As the finishing operation progresses, the concrete shall be immediately covered with a
48 single layer of clean, new or used, wet burlap.

49
50 The last sentence of the second paragraph is deleted.

51
52 The following two new paragraphs are inserted after the second paragraph:

1
2 As an alternative to the application of burlap and fog spraying described above, the
3 Contractor may propose a curing system using proprietary curing blankets specifically
4 manufactured for bridge deck curing. The Contractor shall submit a Type 2 Working
5 Drawing consisting of details of the proprietary curing blanket system, including product
6 literature and details of how the system is to be installed and maintained.

7
8 The wet curing regimen as described shall remain in place for a minimum of 42-hours.
9

10 The last paragraph is deleted.

11 **6-09.3(14) Checking for Bond**

12 The first sentence of the first paragraph is revised to read:

13
14
15 After the requirements for curing have been met, the entire overlaid surface shall be
16 sounded by the Contractor, in a manner accepted by and in the presence of the Engineer,
17 to ensure total bond of the concrete to the bridge deck.

18
19 The last sentence of the first paragraph is deleted.

20
21 The second paragraph is deleted.

22 **Section 6-10, Concrete Barrier** 23 **August 6, 2018**

24 **6-10.2 Materials**

25 In the first paragraph, the reference to “Portland Cement” is revised to read:

26
27
28 Cement 9-01

29 **6-10.3(6) Placing Concrete Barrier**

30 The first two sentences of the first paragraph are revised to read:

31
32
33 Precast concrete barriers Type 2, Type 4, Type F, precast single slope barrier, and
34 transitions shall rest on a paved foundation shaped to a uniform grade and section. The
35 foundation surface for precast concrete barriers Type 2, Type 4, Type F, precast single
36 slope barrier, and transitions shall meet this test for uniformity: When a 10-foot
37 straightedge is placed on the surface parallel to the centerline for the barrier, the surface
38 shall not vary more than ¼ inch from the lower edge of the straightedge.
39

40 **Section 6-11, Reinforced Concrete Walls** 41 **April 2, 2018**

42 **6-11.2 Materials**

43 In the first paragraph, the reference to “Aggregates for Portland Cement Concrete” is revised
44 to read:

45
46 Aggregates for Concrete 9-03.1
47

1 **Section 6-12, Noise Barrier Walls**

2 **August 6, 2018**

3 **6-12.2 Materials**

4 In the first paragraph, the reference to “Aggregates for Portland Cement Concrete” is revised
5 to read:

6
7 Aggregates for Concrete 9-03.1

8
9 The first paragraph is supplemented with the following new material reference:

10
11 Noise Barrier Wall Access Door 9-06.17

12
13 **6-12.3(9) Access Doors and Concrete Landing Pads**

14 The second paragraph is deleted and replaced with the following:

15
16 All frame and door surfaces, except stainless steel surfaces, shall be painted in
17 accordance with Section 6-07.3(9). Primer shall be applied to all non-stainless steel
18 surfaces. All primer coated exposed metal surfaces shall be field painted with the
19 remaining Section 6-07.3(9)A paint system coats. The top coat, when dry, shall match the
20 color specified in the Plans or Special Provisions.

21
22 This section is supplemented with the following:

23
24 Access door deadbolt locks shall be capable of accepting a Best CX series core. The
25 Contractor shall furnish and install a spring-loaded construction core lock with each lock.
26 The Engineer will furnish the permanent Best CX series core for the Contractor to install
27 at the conclusion of the project.

28
29 **Section 6-13, Structural Earth Walls**

30 **August 6, 2018**

31 **6-13.2 Materials**

32 In the first paragraph, the reference to “Aggregates for Portland Cement Concrete” is revised
33 to read:

34
35 Aggregates for Concrete 9-03.1

36
37 **6-13.3(4) Precast Concrete Facing Panel and Concrete Block Fabrication**

38 Item number 1 of the sixth paragraph is revised to read:

39
40 1. Vertical dimensions shall be $\pm \frac{1}{16}$ inch of the Plan dimension, and the rear height
41 shall not exceed the front height.

42
43 Item number 3 of the sixth paragraph is revised to read:

44
45 3. All other dimensions shall be $\pm \frac{1}{4}$ inch of the Plan dimension.

46

1 **Section 6-14, Geosynthetic Retaining Walls**

2 **April 2, 2018**

3 **6-14.2 Materials**

4 In the first paragraph, the references to “Portland Cement” and “Aggregates for Portland
5 Cement Concrete” are revised to read:

6

7	Cement	9-01
8	Aggregates for Concrete	9-03.1

9

10 **Section 6-15, Soil Nail Walls**

11 **January 7, 2019**

12 **6-15.3(7) Shotcrete Facing**

13 The last paragraph is supplemented with the following:

14

15 After final tightening of the nut, the threads of the soil nail shall at a minimum be flush with
16 the end of the nut.

17

18 **Section 6-16, Soldier Pile and Soldier Pile Tieback Walls**

19 **April 2, 2018**

20 **6-16.2 Materials**

21 In the first paragraph, the reference to “Aggregates for Portland Cement Concrete” is revised
22 to read:

23

24	Aggregates for Concrete	9-03.1
----	-------------------------	--------

25

26 **Section 6-18, Shotcrete Facing**

27 **April 1, 2019**

28 **6-18.2 Materials**

29 The reference to metakaolin is deleted.

30

31 **6-18.3(3) Testing**

32 In the last sentence of the first paragraph, “AASHTO T 24” is revised to read “ASTM C1604”.

33

34 **6-18.3(3)B Production Testing**

35 In the last sentence, “AASHTO T 24” is revised to read “ASTM C1604”.

36

37 **6-18.3(4) Qualifications of Contractor’s Personnel**

38 In the last sentence of the second paragraph, “AASHTO T 24” is revised to read “ASTM
39 C1604”.

40

41 **Section 6-19, Shafts**

42 **January 7, 2019**

43 **6-19.2 Materials**

44 In the first paragraph, the references to “Portland Cement” and “Aggregates for Portland
45 Cement Concrete” are revised to read:

46

1 Cement 9-01
2 Aggregates for Concrete 9-03.1
3

4 **6-19.3(1)A Shaft Construction Tolerances**

5 The last paragraph is supplemented with the following:
6

7 The elevation of the top of the reinforcing cage for drilled shafts shall be within +6 inches
8 and -3 inches from the elevation shown in the Plans.
9

10 **6-19.3(2)D Nondestructive QA Testing Organization and Personnel**

11 Item number 4 in the first paragraph is revised to read:
12

- 13 4. Personnel preparing test reports shall be a Professional Engineer, licensed under
14 Title 18 RCW, State of Washington, and shall seal the report in accordance with WAC
15 196-23-020.
16

17 **6-19.3(3)C Conduct of Shaft Casing Installation and Removal and Shaft
18 Excavation Operations**

19 The first paragraph is supplemented with the following:
20

21 In no case shall shaft excavation and casing placement extend below the bottom of shaft
22 excavation as shown in the Plans.
23

24 **6-19.3(6)E Thermal Wire and Thermal Access Point (TAPS)**

25 The third sentence of the third paragraph is revised to read:
26

27 The thermal wire shall extend from the bottom of the reinforcement cage to the top of the
28 shaft, with a minimum of 5-feet of slack wire provided above the top of shaft.
29

30 The following new sentence is inserted after the third sentence of the third paragraph:
31

32 All thermal wires in a shaft shall be equal lengths.
33

34 **6-19.3(9)D Nondestructive QA Testing Results Submittal**

35 The last sentence of the first paragraph is revised to read:
36

37 Results shall be a Type 2E Working Drawing presented in a written report.
38

39 **Section 7-02, Culverts**

40 **April 2, 2018**

41 **7-02.2 Materials**

42 In the first paragraph, the references to "Portland Cement" and "Aggregates for Portland
43 Cement Concrete" are revised to read:
44

45 Cement 9-01
46 Aggregates for Concrete 9-03.1
47

48 **7-02.3(6)A4 Excavation and Bedding Preparation**

49 The first sentence of the third paragraph is revised to read:
50

1 The bedding course shall be a 6-inch minimum thickness layer of culvert bedding material,
2 defined as granular material either conforming to Section 9-03.12(3) or to AASHTO
3 Grading No. 57 as specified in Section 9-03.1(4)C.
4

5 **Section 7-05, Manholes, Inlets, Catch Basins, and Drywells**
6 **August 6, 2018**

7 **7-05.3 Construction Requirements**

8 The fourth sentence of the third paragraph is deleted.
9

10 **Section 7-08, General Pipe Installation Requirements**
11 **April 2, 2018**

12 **7-08.3(3) Backfilling**

13 The fifth sentence of the fourth paragraph is revised to read:
14

15 All compaction shall be in accordance with the Compaction Control Test of Section 2-
16 03.3(14)D except in the case that 100% Recycled Concrete Aggregate is used.
17

18 The following new sentences are inserted after the fifth sentence of the fourth paragraph:
19

20 When 100% Recycled Concrete Aggregate is used, the Contractor may submit a written
21 request to use a test point evaluation for compaction acceptance. Test Point evaluation
22 shall be performed in accordance with SOP 738.
23

24 **Section 8-01, Erosion Control and Water Pollution Control**
25 **April 1, 2019**

26 **8-01.1 Description**

27 This section is revised to read:
28

29 This Work consists of furnishing, installing, maintaining, removing and disposing of best
30 management practices (BMPs), as defined in the Washington Administrative Code (WAC)
31 173-201A, to manage erosion and water quality in accordance with these Specifications
32 and as shown in the Plans or as designated by the Engineer.
33

34 The Contracting Agency may have a National Pollution Discharge Elimination System
35 Construction Stormwater General Permit (CSWGP) as identified in the Contract Special
36 Provisions. The Contracting Agency may or may not transfer coverage of the CSWGP to
37 the Contractor when a CSWGP has been obtained. The Contracting Agency may not
38 have a CSWGP for the project but may have another water quality related permit as
39 identified in the Contract Special Provisions or the Contracting Agency may not have
40 water quality related permits but the project is subject to applicable laws for the Work.
41 Section 8-01 covers all of these conditions.
42

43 This section is supplemented with the following new subsection:
44

45 **8-01.1(1) Definitions**

46 **1. pH Affected Stormwater**
47

- 1 a. Stormwater contacting green concrete (concrete that has set/stiffen but is still
- 2 curing), recycled concrete, or engineered soils (as defined in the Construction
- 3 Stormwater General Permit (CSWGP)) as a natural process
- 4
- 5 b. pH monitoring shall be performed in accordance with the CSWGP, or Water
- 6 Quality Standards (WQS in accordance with WAC 173-201A (surface) or 173-
- 7 200C (ground)) when the CSWGP does not apply
- 8
- 9 c. May be neutralized and discharged to surface waters or infiltrated

10

11 **2. pH Affected Non-Stormwater**

12

- 13 a. Conditionally authorized in accordance with CSWGP Special Condition S.1.C.,
- 14 uncontaminated water contacting green concrete, recycled concrete, or
- 15 engineered soils (as defined in the CSWGP)
- 16
- 17 b. Shall not be categorized as cementitious wastewater/concrete wastewater, as
- 18 defined below
- 19
- 20 c. Shall be managed and treated in accordance with the CSWGP, or WQS when
- 21 the CSWGP does not apply
- 22
- 23 d. pH adjustment and dechlorination may be necessary, as specified in the
- 24 CSWGP or in accordance with WQS when the CSWGP does not apply
- 25
- 26 e. May be neutralized, treated, and discharged to surface waters in accordance
- 27 with the CSWGP, with the exception of water-only shaft drilling slurry. Water-only
- 28 shaft drilling slurry may be treated, neutralized, and infiltrated but not discharged
- 29 to surface waters (Refer to Special Conditions S1.C. Authorized Discharges and
- 30 S1.d Prohibited Discharges of the CSWGP)

31

32 **3. Cementitious Wastewater/Concrete Wastewater**

33

- 34 a. Any water that comes into contact with fine cementitious particles or slurry; any
- 35 water used in the production, placement and/or clean-up of cementitious
- 36 products; any water used to cut, grind, wash, or otherwise modify cementitious
- 37 products
- 38
- 39 b. When any water, including stormwater, commingles with cementitious
- 40 wastewater/concrete wastewater, the resulting water is considered cementitious
- 41 wastewater/concrete wastewater and shall be managed to prevent discharge to
- 42 waters of the State, including ground water
- 43
- 44 c. CSWGP Examples include: water used for or resulting from concrete
- 45 truck/mixer/pumper/tool/chute rinsing or washing, concrete saw cutting and
- 46 surfacing (sawing, coring, grinding, roughening, hydro-demolition, bridge and
- 47 road surfacing)
- 48
- 49 d. Cannot be neutralized and discharged or infiltrated

50

51 **8-01.2 Materials**

52 The first paragraph is revised to read:

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Materials shall meet the requirements of the following sections:

Corrugated Polyethylene Drain Pipe	9-05.1(6)
Quarry Spalls and Permeable Ballast	9-13
Erosion Control and Roadside Planting	9-14
Construction Geotextile	9-33

The second paragraph is deleted.

8-01.3(1) General

This section is revised to read:

Adaptive management shall be employed throughout the duration of the project for the implementation of erosion and water pollution control permit requirements for the current condition of the project site. The adaptive management includes the selection and utilization of BMPs, scheduling of activities, prohibiting unacceptable practices, implementing maintenance procedures, and other managerial practices that when used singularly or in combination, prevent or reduce the release of pollutants to waters of the State. The adaptive management shall use the means and methods identified in this section and means and methods identified in the Washington State Department of Transportation’s Temporary Erosion and Sediment Control Manual or the Washington State Department of Ecology’s Stormwater Management Manuals for construction stormwater.

The Contractor shall install a high visibility fence along the lines shown in the Plans or as instructed by the Engineer.

Throughout the life of the project, the Contractor shall preserve and protect the delineated preservation area, acting immediately to repair or restore any high visibility fencing damaged or removed.

All discharges to surface waters shall comply with surface water quality standards as defined in Washington Administrative Code (WAC) Chapter 173-201A. All discharges to groundwater shall comply with groundwater quality standards WAC Chapter 173-200. The Contractor shall comply with the CSWGP when the project is covered by the CSWGP.

Work, at a minimum, shall include the implementation of:

1. Sediment control measures prior to ground disturbing activities to ensure all discharges from construction areas receive treatment prior to discharging from the site.
2. Flow control measures to prevent erosive flows from developing.
3. Water management strategies and pollution prevention measures to prevent contamination of waters that will be discharged to surface waters or the ground.
4. Erosion control measures to stabilize erodible earth not being worked.
5. Maintenance of BMPs to ensure continued compliant performance.

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- 6. Immediate corrective action if evidence suggests construction activity is not in compliance. Evidence includes sampling data, olfactory or visual evidence such as the presence of suspended sediment, turbidity, discoloration, or oil sheen in discharges.

To the degree possible, the Contractor shall coordinate this Work with permanent drainage and roadside restoration Work the Contract requires.

Clearing, grubbing, excavation, borrow, or fill within the Right of Way shall never expose more erodible earth than as listed below:

Western Washington (West of the Cascade Mountain Crest)		Eastern Washington (East of the Cascade Mountain Crest)	
May 1 through September 30	17 Acres	April 1 through October 31	17 Acres
October 1 through April 30	5 Acres	November 1 through March 31	5 Acres

12
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20

The Engineer may increase or decrease the limits based on project conditions.

Erodible earth is defined as any surface where soils, grindings, or other materials may be capable of being displaced and transported by rain, wind, or surface water runoff.

Erodible earth not being worked, whether at final grade or not, shall be covered within the specified time period (see the table below), using BMPs for erosion control.

Western Washington (West of the Cascade Mountain Crest)		Eastern Washington (East of the Cascade Mountain Crest)	
October 1 through April 30	2 days maximum	October 1 through June 30	5 days maximum
May 1 to September 30	7 days maximum	November 1 through March 31	10 days maximum

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When applicable, the Contractor shall be responsible for all Work required for compliance with the CSWGP including annual permit fees.

If the Engineer, under Section 1-08.6, orders the Work suspended, the Contractor shall continue to comply with this division during the suspension.

8-01.3(1)A Submittals

This section's content is deleted.

This section is supplemented with the following new subsection:

8-01.3(1)A1 Temporary Erosion and Sediment Control Plan

Temporary Erosion and Sediment Control (TESC) Plans consist of a narrative section and plan sheets that meets the Washington State Department of Ecology's Stormwater

1 Pollution Prevention Plan (SWPPP) requirement in the CSWGP. For projects that do not
2 require a CSWGP but have the potential to discharge to surface waters of the state, an
3 abbreviated TESC plan shall be used, which may consist of a narrative and/or plan sheets
4 and shall demonstrate compliance with applicable codes, ordinances and regulations,
5 including the water quality standards for surface waters; Chapter 173-201A of the
6 Washington Administrative Code (WAC) and water quality standards for groundwaters in
7 accordance with Chapter 173-200 WAC.

8
9 The Contractor shall either adopt the TESC Plan in the Contract or develop a new TESC
10 Plan. If the Contractor adopts the TESC Plan in scenarios in which the CSWGP is
11 transferred to the Contractor, the Contractor shall modify the TESC Plan to match the
12 Contractor's schedule, method of construction, and to include all areas that will be used
13 to directly support construction activity such as equipment staging yards, material storage
14 areas, or borrow areas. TESC Plans shall include all high visibility fence shown in the
15 Plans. All TESC Plans shall meet the requirements of the current edition of the WSDOT
16 Temporary Erosion and Sediment Control Manual M 3109 and be adaptively managed
17 throughout construction based on site inspections and required sampling to maintain
18 compliance with the CSWGP, or WQS when no CSWGP applies. The Contractor shall
19 develop a schedule for implementation of the TESC work and incorporate it into the
20 Contractor's progress schedule.

21
22 The Contractor shall submit their TESC Plan (either the adopted plan or new plan) as
23 Type 2 Working Drawings. At the request of the Engineer, updated TESC Plans shall be
24 submitted as Type 1 Working Drawings.

25 26 **8-01.3(1)B Erosion and Sediment Control (ESC) Lead**

27 This section is revised to read:

28
29 The Contractor shall identify the ESC Lead at the preconstruction discussions and in the
30 TESC Plan. The ESC Lead shall have, for the life of the Contract, a current Certificate of
31 Training in Construction Site Erosion and Sediment Control from a course approved by
32 the Washington State Department of Ecology. The ESC Lead must be onsite or on call at
33 all times throughout construction. The ESC Lead shall be listed on the Emergency
34 Contact List required under Section 1-05.13(1).

35
36 The ESC Lead shall implement the TESC Plan. Implementation shall include, but is not
37 limited to:

- 38
- 39 1. Installing, adaptively managing, and maintaining temporary erosion and
40 sediment control BMPs to assure continued performance of their intended
41 function. Damaged or inadequate BMPs shall be corrected immediately.
 - 42 2. Updating the TESC Plan to reflect current field conditions.
 - 43 3. Discharge sampling and submitting Discharge Monitoring Reports (DMRs) to
44 the Washington State Department of Ecology in accordance with the CSWGP.
 - 45 4. Develop and maintain the Site Log Book as defined in the CSWGP. When the
46 Site Log Book or portion thereof is electronically developed, the electronic
47 documentation must be accessible onsite. As a part of the Site Log Book, the
48 Contractor shall develop and maintain a tracking table to show that identified
49 TESC compliance issues are fully resolved within 10 calendar days. The table
50
51
52

1 shall include the date an issue was identified, a description of how it was
2 resolved, and the date the issue was fully resolved.
3
4 The ESC Lead shall also inspect all areas disturbed by construction activities, all on-site
5 erosion and sediment control BMPs, and all stormwater discharge points at least once
6 every calendar week and within 24-hours of runoff events in which stormwater discharges
7 from the site. Inspections of temporarily stabilized, inactive sites may be reduced to once
8 every calendar month. The Washington State Department of Ecology's Erosion and
9 Sediment Control Site Inspection Form, located at [https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Construction-stormwater-](https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Construction-stormwater-permit)
10 permit, shall be completed for each inspection and a copy shall be submitted to the
11 Engineer no later than the end of the next working day following the inspection.
12
13
14 **8-01.3(1)C Water Management**
15 This section is supplemented with the following new subsections:
16
17 **8-01.3(1)C5 Water Management for In-Water Work Below Ordinary High**
18 **Water Mark (OHWM)**
19 Work over surface waters of the state (defined in WAC 173-201A-010) or below the
20 OHWM (defined in RCW 90.58.030) shall comply with water quality standards for surface
21 waters of the State of Washington.
22
23 **8-01.3(1)C6 Environmentally Acceptable Hydraulic Fluid**
24 All equipment containing hydraulic fluid that extends from a bridge deck over surface
25 waters of the state or below the OHWM, shall be equipped with a biodegradable hydraulic
26 fluid. The fluid shall achieve either a Pw1 Environmental Persistence Classification stated
27 in ASTM D6046 ($\geq 60\%$ biodegradation in 28 days) or equivalent standard. Alternatively,
28 hydraulic fluid that meets International Organization for Standardization (ISO 15380), the
29 European Union Ecolabel, or equivalent certification will also be accepted.
30
31 The Contractor shall submit a Type 1 Working Drawing consisting of a manufacturer
32 catalog cut of the hydraulic fluid used.
33
34 The designation of biodegradable hydraulic fluid does not mean fluid spills are
35 acceptable. The Contractor shall respond to spills to land or water in accordance with the
36 Contract, the associated SPCC Plan, and all applicable local, state, and federal
37 regulations.
38
39 **8-01.3(1)C7 Turbidity Curtain**
40 All Work for the turbidity curtain shall be in accordance with the manufacturer's
41 recommendations for the site conditions. Removal procedures shall be developed and
42 used to minimize silt release and disturbance of silt. The Contractor shall submit a Type
43 2 Working Drawing, detailing product information, installation and removal procedures,
44 equipment and workforce needs, maintenance plans, and emergency repair/replacement
45 plans.
46
47 Turbidity curtain materials, installation, and maintenance shall be sufficient to comply with
48 water quality standards.
49
50 The Contractor shall notify the Engineer 10 days in advance of removing the turbidity
51 curtain. All components of the turbidity curtain shall be removed from the project.
52

1 **8-01.3(1)C1 Disposal of Dewatering Water**

2 This section is revised to read:

3

4 When uncontaminated groundwater is encountered in an excavation on a project it may
5 be infiltrated within vegetated areas of the right of way not designated as Sensitive Areas
6 or incorporated into an existing stormwater conveyance system at a rate that will not
7 cause erosion or flooding in any receiving surface water.

8

9 Alternatively, the Contractor may pursue independent disposal and treatment alternatives
10 that do not use the stormwater conveyance system provided it is in compliance with the
11 applicable WACs and permits.

12

13 **8-01.3(1)C2 Process Wastewater**

14 This section is revised to read:

15

16 Wastewater generated on-site as a byproduct of a construction process shall not be
17 discharged to surface waters of the State. Some sources of process wastewater may be
18 infiltrated in accordance with the CSWGP. Some sources of process wastewater may be
19 disposed via independent disposal and treatment alternatives in compliance with the
20 applicable WACs and permits.

21

22 **8-01.3(1)C3 Shaft Drilling Slurry Wastewater**

23 This section is revised to read:

24

25 Wastewater generated on-site during shaft drilling activity shall be managed and disposed
26 of in accordance with the requirements below. No shaft drilling slurry wastewater shall be
27 discharged to surface waters of the State. Neither the sediment nor liquid portions of the
28 shaft drilling slurry wastewater shall be contaminated, as detectable by visible or olfactory
29 indication (e.g., chemical sheen or smell).

30

31 1. Water-only shaft drilling slurry or water slurry with accepted flocculants may be
32 infiltrated on-site. Flocculants used shall meet the requirements of Section 9-
33 14.5(1) or shall be chitosan products listed as General Use Level Designation
34 (GULD) on the Washington State Department of Ecology's stormwater treatment
35 technologies webpage for construction treatment. Infiltration is permitted if the
36 following requirements are met:

37

- 38 a. Wastewater shall have a pH of 6.5 – 8.5 prior to discharge.
- 39
- 40 b. The amount of flocculant added to the slurry shall be kept to the minimum
41 needed to adequately settle out solids. The flocculant shall be thoroughly
42 mixed into the slurry.
- 43
- 44 c. The slurry removed from the shaft shall be contained in a leak proof cell or
45 tank for a minimum of 3 hours.
- 46
- 47 d. The infiltration rate shall be reduced if needed to prevent wastewater from
48 leaving the infiltration location. The infiltration site shall be monitored
49 regularly during infiltration activity. All wastewater discharged to the ground
50 shall fully infiltrate and discharges shall stop before the end of each work
51 day.
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- e. Drilling spoils and settled sediments remaining in the containment cell or tank shall be disposed of in accordance with Section 6-19.3(4)F.
- f. Infiltration locations shall be in upland areas at least 150 feet away from surface waters, wells, on-site sewage systems, aquifer sensitive recharge areas, sole source aquifers, well head protection areas, and shall be marked on the plan sheets before the infiltration activity begins.
- g. Prior to infiltration, the Contractor shall submit a Shaft Drilling Slurry Wastewater Management and Infiltration Plan as a Type 2 Working Drawing. This Plan shall be kept on-site, adapted if needed to meet the construction requirements, and updated to reflect what is being done in the field. The Working Drawing shall include, at a minimum, the following information:
 - i. Plan sheet showing the proposed infiltration location and all surface waters, wells, on-site sewage systems, aquifer-sensitive recharge areas, sole source aquifers, and well-head protection areas within 150 feet.
 - ii. The proposed elevation of soil surface receiving the wastewater for infiltration and the anticipated phreatic surface (i.e., saturated soil).
 - iii. The source of the water used to produce the slurry.
 - iv. The estimated total volume of wastewater to be infiltrated.
 - v. The accepted flocculant to be used (if any).
 - vi. The controls or methods used to prevent surface wastewater runoff from leaving the infiltration location.
 - vii. The strategy for removing slurry wastewater from the shaft and containing the slurry wastewater once it has been removed from the shaft.
 - viii. The strategy for monitoring infiltration activity and adapting methods to ensure compliance.
 - ix. A contingency plan that can be implemented immediately if it becomes evident that the controls in place or methods being used are not adequate.
 - x. The strategy for cleaning up the infiltration location after the infiltration activity is done. Cleanup shall include stabilizing any loose sediment on the surface within the infiltration area generated as a byproduct of suspended solids in the infiltrated wastewater or soil disturbance associated with BMP placement and removal.
- 2. Shaft drilling mineral slurry, synthetic slurry, or slurry with polymer additives not allowed for infiltration shall be contained and disposed of by the Contractor at an accepted disposal facility in accordance with Section 2-03.3(7)C. Spoils that

1 have come into contact with mineral slurry shall be disposed of in accordance
2 with Section 6-19.3(4)F.

3
4 **8-01.3(1)C4 Management of Off-Site Water**

5 This section is revised to read:

6
7 Prior to clearing and grubbing, the Contractor shall intercept all sources of off-site surface
8 water and overland flow that will run-on to the project. Off-site surface water run-on shall
9 be diverted through or around the project in a way that does not introduce construction
10 related pollution. It shall be diverted to its preconstruction discharge location in a manner
11 that does not increase preconstruction flow rate and velocity and protects contiguous
12 properties and waterways from erosion. The Contractor shall submit a Type 2 Working
13 Drawing consisting of the method for performing this Work.

14
15 **8-01.3(1)E Detention/Retention Pond Construction**

16 This section is revised to read:

17
18 Permanent or temporary ponds shall be constructed before beginning other grading and
19 excavation Work in the area that drains into that pond. Detention/retention ponds may be
20 constructed concurrently with grading and excavation when allowed by the Engineer.
21 Temporary conveyances shall be installed concurrently with grading in accordance with
22 the TESC Plan so that newly graded areas drain to the pond as they are exposed.

23
24 **8-01.3(2) Seeding, Fertilizing, and Mulching**

25 This section's title is revised to read:

26
27 **8-01.3(2) Temporary Seeding and Mulching**

28
29 **8-01.3(2)A Preparation for Application**

30 This section is revised to read:

31
32 A cleated roller, crawler tractor, or similar equipment, which forms longitudinal
33 depressions at least 2 inches deep shall be used for compaction and preparation of the
34 surface to be seeded. The entire area shall be uniformly covered with longitudinal
35 depressions formed perpendicular to the natural flow of water on the slope. The soil shall
36 be conditioned with sufficient water so the longitudinal depressions remain in the soil
37 surface until completion of the seeding.

38
39 **8-01.3(2)A1 Seeding**

40 This section is deleted in its entirety.

41
42 **8-01.3(2)A2 Temporary Seeding**

43 This section is deleted in its entirety.

44
45 **8-01.3(2)B Seeding and Fertilizing**

46 This section, including title, is revised to read:

47
48 **8-01.3(2)B Temporary Seeding**

49 Temporary grass seed shall be a commercially prepared mix, made up of low growing
50 grass species that will grow without irrigation at the project location, and accepted by the
51 Engineer. The application rate shall be two pounds per 1000 square feet.

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The Contractor shall notify the Engineer not less than 24 hours in advance of any seeding operation and shall not begin the Work until areas prepared or designated for seeding have been accepted. Following the Engineer's acceptance, seeding of the accepted slopes shall begin immediately.

Temporary seeding may be sown at any time allowed by the Engineer. Temporary seeding shall be sown by one of the following methods:

1. A hydro seeder that utilizes water as the carrying agent, and maintains continuous agitation through paddle blades. It shall have an operating capacity sufficient to agitate, suspend, and mix into a homogeneous slurry the specified amount of seed and water or other material. Distribution and discharge lines shall be large enough to prevent stoppage and shall be equipped with a set of hydraulic discharge spray nozzles that will provide a uniform distribution of the slurry.
2. Blower equipment with an adjustable disseminating device capable of maintaining a constant, measured rate of material discharge that will ensure an even distribution of seed at the rates specified.
3. Power-drawn drills or seeders.
4. Areas in which the above methods are impractical may be seeded by hand methods.

When seeding by hand, the seed shall be incorporated into the top ¼ inch of soil by hand raking or other method that is allowed by the Engineer.

Seed applied using a hydroseeder shall have a tracer added to visibly aid uniform application. This tracer shall not be harmful to plant, aquatic, or animal life. If Short-Term Mulch is used as a tracer, the application rate shall not exceed 250 pounds per acre.

Seed and fertilizer may be applied in one application provided that the fertilizer is placed in the hydroseeder tank no more than 1 hour prior to application.

8-01.3(2)D Mulching

This section, including title, is revised to read:

8-01.3(2)D Temporary Mulching

Temporary mulch shall be straw, wood strand, or HECP mulch and shall be used for the purpose of erosion control by protecting bare soil surface from particle displacement. Mulch shall not be applied below the anticipated water level of ditch slopes, pond bottoms, and stream banks. HECP mulch shall not be used within the Ordinary High Water Mark. Non-HECP mulches applied below the anticipated water level shall be removed or anchored down so that it cannot move or float, at no additional expense to the Contracting Agency.

Straw or wood strand mulch shall be applied at a rate to achieve at least 95 percent visual blockage of the soil surface.

1 Short Term Mulch shall be hydraulically applied at the rate of 2500 pounds per acre and
2 may be applied in one lift.
3
4 Moderate Term Mulch and Long Term Mulch shall be hydraulically applied at the rate of
5 3500 pounds per acre with no more than 2000 pounds applied in any single lift.
6
7 Mulch sprayed on signs or sign Structures shall be removed the same day.
8
9 Areas not accessible by mulching equipment shall be mulched by accepted
10 hand methods.

11
12 **8-01.3(2)F Dates for Application of Final Seed, Fertilizer, and Mulch**

13 This section is deleted in its entirety.

14

15 **8-01.3(2)G Protection and Care of Seeded Areas**

16 This section is deleted in its entirety.

17

18 **8-01.3(2)H Inspection**

19 This section is deleted in its entirety.

20

21 **8-01.3(2)I Mowing**

22 This section is deleted in its entirety.

23

24 **8-01.3(3) Placing Biodegradable Erosion Control Blanket**

25 This section's title is revised to read:

26

27 **8-01.3(3) Placing Erosion Control Blanket**

28

29 The first sentence of the first paragraph is revised to read:

30

31 Erosion Control Blankets are used as an erosion prevention device and to enhance the
32 establishment of vegetation.

33

34 The second paragraph is revised to read:

35

36 When used to enhance the establishment of seeded areas, seeding and fertilizing shall
37 be done prior to blanket installation.

38

39 **8-01.3(4) Placing Compost Blanket**

40 This section is revised to read:

41

42 Compost blankets are used for erosion control. Compost blanket shall be only be placed
43 on ground surfaces that are steeper than 3-foot horizontal and 1-foot vertical though
44 steeper slopes shall be broken by wattles or compost socks placed according to the
45 Standard Plans. Compost shall be placed to a depth of 3 inches over bare soil. An organic
46 tackifier shall be placed over the entire composted area when dry or windy conditions are
47 present or expected. The tackifier shall be applied immediately after the application of
48 compost to prevent compost from leaving the composted area.

49

50 Medium compost shall be used for the compost blanket. Compost may serve the purpose
51 of soil amendment as specified in Section 8-02.3(6).

52

1 **8-01.3(5) Plastic Covering**

2 The first paragraph is revised to read:

3

4 **Erosion Control** – Plastic coverings used to temporarily cover stockpiled materials,
5 slopes or bare soils shall be installed and maintained in a way that prevents water from
6 intruding under the plastic and prevents the plastic cover from being damaged by wind.
7 Plastic coverings shall be placed with at least a 12-inch overlap of all seams and be a
8 minimum of 6 mils thick. Use soil stabilization and energy dissipation BMPs to minimize
9 the erosive energy flows coming off sloped areas of plastic (e.g., toe of slope). When
10 feasible, prevent the clean runoff from plastic from hitting bare soil. Direct flows from
11 plastic to stabilized outlet areas.

12

13 **8-01.3(7) Stabilized Construction Entrance**

14 The first paragraph is revised to read:

15

16 Temporary stabilized construction entrance shall be constructed in accordance with the
17 *Standard Plans*, prior to construction vehicles entering the roadway from locations that
18 generate sediment track out on the roadway. Material used for stabilized construction
19 entrance shall be free of extraneous materials that may cause or contribute to track out.

20

21 **8-01.3(8) Street Cleaning**

22 This section is revised to read:

23

24 Self-propelled pickup street sweepers shall be used to remove and collect dirt and other
25 debris from the Roadway. The street sweeper shall effectively collect these materials and
26 prevent them from being washed or blown off the Roadway or into waters of the State.
27 Street sweepers shall not generate fugitive dust and shall be designed and operated in
28 compliance with applicable air quality standards. Material collected by the street sweeper
29 shall be disposed of in accordance with Section 2-03.3(7)C.

30

31 When allowed by the Engineer, power broom sweepers may be used in non-sensitive
32 areas. The broom sweeper shall sweep dirt and other debris from the roadway into the
33 work area. The swept material shall be prevented from entering or washing into waters of
34 the State.

35

36 Street washing with water will require the concurrence of the Engineer.

37

38 **8-01.3(12) Compost Socks**

39 The first two sentences of the first paragraph are revised to read:

40

41 Compost socks are used to disperse flow and sediment. Compost socks shall be installed
42 as soon as construction will allow but before flow conditions create erosive flows or
43 discharges from the site. Compost socks shall be installed prior to any mulching or
44 compost placement.

45

46 **8-01.3(13) Temporary Curb**

47 The last two sentences of the second paragraph are revised to read:

48

49 Temporary curbs shall be a minimum of 4 inches in height. Temporary curb shall be
50 installed so that ponding does not occur in the adjacent roadway.

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8-01.3(14) Temporary Pipe Slope Drain

The third and fourth paragraphs are revised to read:

The pipe fittings shall be water tight and the pipe secured to the slope with metal posts, wood stakes, or sand bags.

The water shall be discharged to a stabilized conveyance, sediment trap, stormwater pond, rock splash pad, or vegetated strip, in a manner to prevent erosion and maintain water quality compliance.

The last paragraph is deleted.

8-01.3(15) Maintenance

This section is revised to read:

Erosion and sediment control BMPs shall be maintained or adaptively managed as required by the CSWGP until the Engineer determines they are no longer needed. When deficiencies in functional performance are identified, the deficiencies shall be rectified immediately.

The BMPs shall be inspected on the schedule outlined in Section 8-01.3(1)B for damage and sediment deposits. Damage to or undercutting of BMPs shall be repaired immediately.

In areas where the Contractor's activities have compromised the erosion control functions of the existing grasses, the Contractor shall overseed at no additional cost to the Contracting Agency.

The quarry spalls of construction entrances shall be refreshed, replaced, or screened to maintain voids between the spalls for collecting mud and dirt.

Unless otherwise specified, when the depth of accumulated sediment and debris reaches approximately $\frac{1}{3}$ the height of the BMP the deposits shall be removed. Debris or contaminated sediment shall be disposed of in accordance with Section 2-03.3(7)C. Clean sediments may be stabilized on-site using BMPs as allowed by the Engineer.

8-01.3(16) Removal

This section is revised to read:

The Contractor shall remove all temporary BMPs, all associated hardware and associated accumulated sediment deposition from the project limits prior to Physical Completion unless otherwise allowed by the Engineer. When the temporary BMP materials are made of natural plant fibers unaltered by synthetic materials the Engineer may allow leaving the BMP in place.

The Contractor shall remove BMPs and associated hardware in a way that minimizes soil disturbance. The Contractor shall permanently stabilize all bare and disturbed soil after removal of BMPs. If the installation and use of the erosion control BMPs have compacted or otherwise rendered the soil inhospitable to plant growth, such as construction entrances, the Contractor shall take measures to rehabilitate the soil to facilitate plant growth. This may include, but is not limited to, ripping the soil, incorporating soil amendments, or seeding with the specified seed.

1
2 At the request of the Contractor and at the sole discretion of the Engineer the CSWGP
3 may be transferred back to the Contracting Agency. Approval of the Transfer of Coverage
4 request will require the following:

- 5
6 1. All other Work required for Contract Completion has been completed.
7
8 2. All Work required for compliance with the CSWGP has been completed to the
9 maximum extent possible. This includes removal of BMPs that are no longer
10 needed and the site has undergone all Stabilization identified for meeting the
11 requirements of Final Stabilization in the CSWGP.
12
13 3. An Equitable Adjustment change order for the cost of Work that has not been
14 completed by the Contractor.
15
16 4. Submittal of the Washington State Department of Ecology Transfer of Coverage
17 form (Ecology form ECY 020-87a) to the Engineer.
18

19 If the Engineer approves the transfer of coverage back to the Contracting Agency, the
20 requirement in Section 1-07.5(3) for the Contractor's submittal of the Notice of
21 Termination form to the Washington State Department of Ecology will not apply.
22

23 **8-01.4 Measurement**

24 This section's content is deleted and replaced with the following new subsections:
25

26 **8-01.4(1) Lump Sum Bid for Project (No Unit Items)**

27 When the Bid Proposal contains the item "Erosion Control and Water Pollution
28 Prevention" there will be no measurement of unit or force account items for Work defined
29 in Section 8-01 except as described in Sections 8-01.4(3) and 8-01.4(4). Also, except as
30 described in Section 8-01.4(3), all of Sections 8-01.4(2) and 8-01.5(2) are deleted.
31

32 **8-01.4(2) Item Bids**

33 When the Proposal does not contain the items "Erosion Control and Water Pollution
34 Prevention", Section 8-01.4(1) and 8-01.5(1) are deleted and the Bid Proposal will contain
35 some or all of the following items measured as noted.
36

37 ESC lead will be measured per day for each day that an inspection is made and a
38 report is filed.
39

40 Erosion control blanket and plastic covering will be measured by the square yard
41 along the ground slope line of surface area covered and accepted.
42

43 Turbidity curtains will be measured by the linear foot along the ground line of the
44 installed curtain.
45

46 Check dams will be measured per linear foot one time only along the ground line of
47 the completed check dam. No additional measurement will be made for check dams
48 that are required to be rehabilitated or replaced due to wear.
49

50 Stabilized construction entrances will be measured by the square yard by ground
51 slope measurement for each entrance constructed.
52

- 1 Tire wash facilities will be measured per each for each tire wash installed.
2
3 Street cleaning will be measured by the hour for the actual time spent cleaning
4 pavement, refilling with water, dumping and transport to and from cleaning locations
5 within the project limits, as authorized by the Engineer. Time to mobilize the
6 equipment to or from the project limits on which street cleaning is required will not be
7 measured.
8
9 Inlet protections will be measured per each for each initial installation at a
10 drainage structure.
11
12 Silt fence, gravel filter, compost berms, and wood chip berms will be measured by
13 the linear foot along the ground line of the completed barrier.
14
15 Wattles and compost socks will be measured by the linear foot.
16
17 Temporary curbs will be measured by the linear foot along the ground line of the
18 completed installation.
19
20 Temporary pipe slope drains will be measured by the linear foot along the flow line
21 of the pipe.
22
23 Coir logs will be measured by the linear foot along the ground line of the completed
24 installation.
25
26 Outlet protections will be measured per each initial installation at an outlet location.
27
28 Temporary seeding, temporary mulching, and tackifiers will be measured by the acre
29 by ground slope measurement.
30
31 Compost blanket will be measured by the square yard by ground slope surface area
32 covered and accepted.
33

34 **8-01.4(3) Reinstating Unit Items with Lump Sum Erosion Control and**
35 **Water Pollution Prevention**

36 The Contract Provisions may establish the project as lump sum, in accordance with
37 Section 8-01.4(1) and also include one or more of the items included above in Section 8-
38 01.4(2). When that occurs, the corresponding measurement provision in Section 8-
39 01.4(2) is not deleted and the Work under that item will be measured as specified.
40

41 **8-01.4(4) Items not included with Lump Sum Erosion Control and Water**
42 **Pollution Prevention**

43 Compost blanket will be measured by the square yard by ground slope surface area
44 covered and accepted.
45

46 Temporary mulch will be measured by the acre by ground slope surface area covered and
47 accepted.
48

49 High visibility fence will be measured by the linear foot along the ground line of the
50 completed fence.
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8-01.5 Payment

This section's content is deleted and replaced with the following new subsections:

8-01.5(1) Lump Sum Bid for Project (No Unit Items)

Payment will be made for the following Bid item when it is included in the Proposal:

“Erosion Control and Water Pollution Prevention”, lump sum.

The lump sum Contract price for “Erosion Control and Water Pollution Prevention” shall be full pay to perform the Work as described in Section 8-01 except for costs compensated by Bid Proposal items inserted through Contract Provisions as described in Section 8-01.4(2). Progress payments for the lump sum item “Erosion Control and Water Pollution Prevention” will be made as follows:

1. The Contracting Agency will pay 15 percent of the bid amount for the initial set up for the item. Initial set up includes the following:
 - a. Acceptance of the TESC Plan provided by the Contracting Agency or submittal of a new TESC Plan,
 - b. Submittal of a schedule for the installation of the BMPs, and
 - c. Identifying water quality sampling locations.
2. 70 percent of the bid amount will be paid in accordance with Section 1-09.9.
3. Once the project is physically complete and copies of the all reports submitted to the Washington State Department of Ecology have been submitted to the Engineer, and, if applicable, transference of the CSWGP back to the Contracting Agency is complete, the remaining 15 percent of the bid amount shall be paid in accordance with Section 1-09.9.

8-01.5(2) Item Bids

“ESC Lead”, per day.

“Turbidity Curtain”, per linear foot.

“Erosion Control Blanket”, per square yard.

“Plastic Covering”, per square yard.

“Check Dam”, per linear foot.

“Inlet Protection”, per each.

“Gravel Filter Berm”, per linear foot.

“Stabilized Construction Entrance”, per square yard.

“Street Cleaning”, per hour.

“Silt Fence”, per linear foot.

- 1
2 "Wood Chip Berm", per linear foot.
3
4 "Compost Berm", per linear foot.
5
6 "Wattle", per linear foot.
7
8 "Compost Sock", per linear foot.
9
10 "Coir Log", per linear foot.
11
12 "Temporary Curb", per linear foot.
13
14 "Temporary Pipe Slope Drain", per linear foot.
15
16 "Temporary Seeding", per acre.
17
18 "Temporary Mulching", per acre.
19
20 "Compost Blanket", per square yard.
21
22 "Outlet Protection", per each.
23
24 "Tackifier", per acre.
25
26 "Erosion/Water Pollution Control", by force account as provided in Section 1-09.6.
27
28 Maintenance and removal of erosion and water pollution control devices including
29 removal and disposal of sediment, stabilization and rehabilitation of soil disturbed
30 by these activities, and any additional Work deemed necessary by the Engineer to
31 control erosion and water pollution will be paid by force account in accordance with
32 Section 1-09.6.
33
34 To provide a common Proposal for all Bidders, the Contracting Agency has entered an
35 amount in the Proposal to become a part of the Contractor's total Bid.
36
37 **8-01.5(3) Reinstating Unit Items with Lump Sum Erosion Control and**
38 **Water Pollution Prevention**
39 The Contract may establish the project as lump sum, in accordance with Section 8-01.4(1)
40 and also reinstate the measurement of one or more of the items described in Section 8-
41 01.4(2), except for Erosion/Water Pollution Control, by force account. When that occurs,
42 the corresponding payment provision in Section 8-01.5(2) is not deleted and the Work
43 under that item will be paid as specified.
44
45 **8-01.5(4) Items not included with Lump Sum Erosion Control and Water**
46 **Pollution Prevention**
47 Payment will be made for the following Bid item when it is included in the Proposal:
48
49 "High Visibility Fence", per linear foot.
50

1 **Section 8-02, Roadside Restoration**
2 **April 1, 2019**

3 This section, including all subsections, is revised to read:
4

5 **8-02.1 Description**

6 This Work consists of preserving, maintaining, establishing and augmenting vegetation
7 on the roadsides and within mitigation or sundry site areas. It includes vegetation
8 preservation, weed and pest control, furnishing and placing topsoil, compost, and soil
9 amendments, and furnishing and planting seed, sod and plants of all forms and container
10 types. It includes performing plant establishment activities and soil bioengineering. Work
11 shall be performed in accordance with these Specifications and as shown in the Plans or
12 as designated by the Engineer.
13

14 Trees, whips, shrubs, ground covers, cuttings, live stakes, live poles, live branches,
15 rhizomes, tubers, rootstock, and seedlings will hereinafter be referred to collectively as
16 "plants" or "plant material". Grass, wildflowers, and other plant materials installed in seed
17 form will hereinafter be referred to collectively as "seed".
18

19 **8-02.2 Materials**

20 Materials shall meet the requirements of the following sections:
21

22	Erosion Control and Roadside Planting	9-14
23	Water	9-25.2

24
25 Botanical identification and nomenclature of plant materials shall be based on
26 descriptions by Hitchcock and Cronquist in "Flora of the Pacific Northwest". Botanical
27 identification and nomenclature of plant material not found in "Flora" shall be based on
28 Bailey in "Hortus Third" or superseding editions and amendments or as referenced in
29 the Plans.
30

31 **8-02.3 Construction Requirements**

32 **8-02.3(1) Responsibility During Construction**

33 The Contractor shall prepare, install, and ensure adequate and proper care of all
34 roadside seeded, planted, and lawn areas on the project until all plant establishment
35 periods required by the Contract are complete or until Physical Completion of the
36 project, whichever is last.
37

38 Adequate and proper care shall include, but is not limited to, keeping all plant material
39 in a healthy, growing condition by watering, pruning, and other actions deemed
40 necessary for plant health. This Work shall include keeping the project area free from
41 insect infestation, weeds or unwanted vegetation, litter, and other debris along with
42 retaining the finished grades and mulch in a neat uniform condition.
43

44 Existing desirable vegetation shall be saved and protected unless removal is required
45 by the Contract or allowed by the Engineer.
46

47 The Contractor shall have sole responsibility for the maintenance and appearance of
48 the roadside restoration.
49

50 **8-02.3(2) Work Plans**

51 Three Work Plan submittals exist under this Section:

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- 1. Roadside Work Plan: This plan is required when Work will disturb the roadside beyond 20 feet from the pavement or where trees or native vegetation will be removed, the Contractor shall submit a Type 2 Working Drawing.
- 2. Weed and Pest Control Plan: This plan is required when the proposal contains the item "Weed and Pest Control," and prior to application of any chemicals or weed control activities, the Contractor shall submit a Type 2 Working Drawing.
- 3. Plant Establishment Plan: This plan is required when the proposal contains the item "PSIPE__", and prior to completion of Initial Planting, the Contractor shall submit a Type 2 Working Drawing.

8-02.3(2)A Roadside Work Plan

The Roadside Work Plan shall define the expected impacts to the roadside and restoration resulting from Work necessary to meet all Contract requirements. The Contractor shall define how the roadside restoration Work included in the Contract will be phased and coordinated with project Work such as earthwork, staging, access, erosion and water pollution control, irrigation, etc. The Roadside Work Plan shall include the following:

- 1. Limiting impacts to roadsides:
 - a. Limits of Work including locations of staging or parking.
 - b. Means and methods for vegetation protection (in accordance with Section 1-07.16(2)).
 - c. Locations outside of clearing limits where vegetation shall be removed to provide access routes or other needs to accomplish the Work.
 - d. Plans for removal, preservation and stockpile of topsoil or other native materials, if outside of clearing and grubbing limits and within the project limits.
- 2. Roadside Restoration:
 - a. Plan for propagation and procurement of plants, ground preparation for planting, and installation of plants.
 - b. Means and methods to limit soil compaction where seeding and planting are to occur, such as steel plates, hog fuel access roads, wood mats for sensitive areas (including removal) and decompaction for unavoidable impacts.
 - c. Plan and timing to incorporate or remove erosion control items.
- 3. Lawn Installation:

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- a. Schedule for lawn installation work.
- b. Establishment and maintenance of lawns.

8-02.3(2)B Weed and Pest Control Plan

The Weed and Pest Control Plan shall describe all weed and pest control needs for the project.

The plan shall be prepared and signed by a licensed Commercial Pest Control Operator or Consultant. The plan for control of weeds and pests on the Contract in accordance with Section 8-02.3(3) shall include the following:

1. Names of plan preparer and pesticide operators, including contact information. The Contractor shall furnish the Engineer evidence that all operators are licensed with appropriate endorsements, and that the pesticide used is registered for use by the Washington State Department of Agriculture.
2. Means and methods of weed control, including mechanical and/or chemical.
3. Schedule for weed control including re-entry times for pesticide application by pesticide type.
4. Proposed pesticide use in accordance with Section 8-02.3(3)A: name, application rate, and Safety Data Sheets of all proposed pesticides. Include a copy of the current product label for each pesticide to be used.
5. Plan to ensure worker safety until pesticide re-entry periods are met.

8-02.3(2)C Plant Establishment Plan

The Plant Establishment Plan shall describe activities necessary to ensure continued health and vigor of planted and seeded areas in accordance with the requirements of Sections 8-02.3(12) and 8-02.3(13). Should the plan become unworkable at any time during the first-year plant establishment, the Contractor shall submit a revised plan prior to proceeding with further Work. The Plant Establishment Plan shall include:

1. Proposed scheduling of joint inspection meetings, activities, materials, equipment to be utilized for the first-year plant establishment.
2. Proposed adaptive management activities to ensure successful establishment of seeded, sodded, and planted areas.
3. A contact person.
4. Management of the irrigation system, when applicable.

8-02.3(3) Weed and Pest Control

The Contractor shall control weed and pest species within the project limits using integrated pest management principles consisting of mechanical, biological, and

1 chemical controls that are outlined in the Weed and Pest Control Plan or as
2 designated by the Engineer. Controlling weeds consists of killing and removing
3 weeds by chemical, mechanical, and hand methods.
4

5 **8-02.3(3)A Chemical Pesticides**

6 Chemical pesticides include, but are not restricted to, any substance or mixture
7 of substances intended for preventing, destroying, repelling or mitigating any
8 pest, including but not limited to, insecticides, herbicides, fungicides, adjuvants,
9 and additives, including plant regulators, defoliants and desiccants. The
10 Contractor shall apply chemical pesticides in accordance with the label
11 recommendations, the Washington State Department of Ecology, local sensitive
12 area ordinances, and Washington State Department of Agriculture laws and
13 regulations. Only those pesticides listed in the table Herbicides Approved for
14 Use on WSDOT Rights of Way and accepted as part of the Weed and Pest
15 Control Plan or by written authorization from the Engineer may be used
16 (www.wsdot.wa.gov/maintenance/roadside/herbicide_use.htm).
17

18 The applicator shall be licensed by the State of Washington as a Commercial
19 Applicator or Commercial Operator, with additional endorsements as required
20 by the Special Provisions or the proposed weed control plan. All chemical
21 pesticides shall be delivered to the job site in the original containers, or if pre-
22 mixed off-site, a certification of the components and formulation from the
23 supplier is required. The licensed applicator or operator shall complete WSDOT
24 Form 540-509, Commercial Pesticide Application Record, each day the
25 pesticide is applied and furnish a copy to the Engineer by the following business
26 day.
27

28 The Contractor shall ensure confinement of the chemicals within the designated
29 areas. The use of spray chemical pesticides shall require the use of anti-drift
30 and activating agents and a spray pattern indicator unless otherwise allowed by
31 the Engineer.
32

33 The Contractor shall assume all responsibility for rendering any area
34 unsatisfactory for planting by reason of chemical application. Damage to
35 adjacent areas, either on or off the Highway Right of Way, shall be repaired to
36 the satisfaction of the Engineer or the property owner at no additional cost to the
37 Contracting Agency.
38

39 **8-02.3(3)B Planting and Lawn Area Weed Control**

40 Planting and lawn area weed control consists of controlling weeds and pests in
41 planted and lawn areas shown in the Plans. This Work is included in the bid
42 items for planting and lawn installation.
43

44 All planting and lawn areas shall be prepared so that they are weed and debris
45 free at the time of planting and until completion of the project. The planting areas
46 shall include the entire ground surface, regardless of cover, areas around plants,
47 and those areas shown in the Plans.
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49 Within planting or lawn areas, all species that are not shown in the Plans are
50 unwanted and shall be controlled unless specifically allowed by the Engineer to
51 remain.
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Grass growing within the mulch ring of a plant, including grass applied in accordance with Sections 8-01.3(2)A1, 8-02.3(9) or 8-02.3(10), shall be considered a weed and shall be controlled on the project in accordance with the weed and pest control plan.

All applications of post-emergent herbicides shall be made while green and growing tissue is present. Residual herbicides shall not be used where rhizomatous species or perennial species are indicated.

Should unwanted vegetation reach the flowering and seed stage in violation of these Specifications, the Contractor shall physically remove and bag the seed heads prior to seed dispersion. All physically removed vegetation and seed heads shall be disposed of off-site at no cost to the Contracting Agency.

8-02.3(3)C Project Area Weed and Pest Control

The Contractor shall control weeds not otherwise covered in accordance with Section 8-02.3(3)B, in all areas within the project limits, including erosion control seeding areas and vegetation preservation areas, as designated by the Engineer.

When the Bid Item "Project Area Weed and Pest Control" is included in the Contract, the Contractor shall also control all weeds specified as noxious by the Washington State Department of Agriculture, the local Weed District, or the County Noxious Weed Control Board outside of planting areas within the project limits.

8-02.3(4) Topsoil

Topsoil shall not be worked or placed when the ground or topsoil is frozen, or excessively wet.

The Contractor shall protect topsoil stockpiled for project use to prevent erosion and weed growth. Weed growth on topsoil stockpile sites shall be immediately eliminated in accordance with the accepted Weed and Pest Control Plan and Section 8-02.3(3)C.

The subsoil where topsoil is to be placed shall be tilled to a depth of 1 foot or as specified in the Special Provisions or the Plans. Topsoil of the type specified shall be evenly spread over the specified areas to the depth shown in the Plans or as otherwise ordered by the Engineer. Topsoil depths greater than 6 inches shall be placed in lifts no more than 6 inches in depth. The first lift of topsoil shall be incorporated with sub-soil to a depth of 8 inches and subsequent lifts placed and lightly tamped between lifts. After the topsoil has been spread, all large clods, hard lumps, and rocks 2 inches in diameter and larger, and litter shall be raked up, removed, and disposed.

8-02.3(4)A Topsoil Type A

Topsoil Type A shall be as specified in the Special Provisions. The Contractor shall submit a certification by the supplier that the contents of the Topsoil meet the requirements in the Special Provisions.

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8-02.3(4)B Topsoil Type B

Topsoil Type B shall be naturally occurring topsoil taken from within the project limits and shall meet the requirements of Section 9-14.1(2). Topsoil Type B shall be taken from areas shown in the Plans to the designated depth and stockpiled at locations that will not interfere with the construction of the project, and outside of sensitive areas, as allowed by the Engineer. A minimum of two weeks prior to excavation of Topsoil Type B, the Contractor shall pre-treat the vegetation on the designated Topsoil Type B areas according to the Weed and Pest Control Plan. Areas beyond the slope stakes shall be disturbed as little as possible in the above operations and under no circumstances shall Topsoil Type B be stockpiled within 10 feet of any existing tree or vegetation area designated to be saved and protected. The Contractor shall protect topsoil stockpile from weed infestation.

The Contractor shall set aside sufficient material to satisfy the needs of the project.

Upon completion of topsoil placement, the Contractor shall dispose of remaining stockpiled Topsoil Type B not required for use on the project at no additional expense to the Contracting Agency in accordance with Section 2-03.3(7)C.

Should a shortage of Topsoil Type B occur, and the Contractor has wasted or otherwise disposed of topsoil material, the Contractor shall furnish Topsoil Type A or C at no additional expense to the Contracting Agency.

8-02.3(4)C Topsoil Type C

Topsoil Type C shall be naturally occurring topsoil obtained from a source provided by the Contractor outside of the Contracting Agency-owned Right of Way. Topsoil Type C shall meet the requirements of Sections 8-02.3(4)B and 9-14.1(3). The Contractor shall not begin removal of Topsoil Type C from the proposed source until the material has been allowed for use by the Engineer.

8-02.3(5) Roadside Seeding, Lawn and Planting Area Preparation

This Work includes preparing worked areas for the installation of all types of permanent erosion control planting. Work shall be conducted so the flow lines in drainage channels are maintained. Material displaced by the Contractor's operations that interferes with drainage shall be removed from the channel and disposed of as allowed by the Engineer.

8-02.3(5)A Seeding Area Preparation

The Contractor shall prepare roadside seeding areas as follows:

1. Remove all excess material, debris, stumps, and rocks greater than 3 inches in diameter from areas to be seeded. Dispose of removed materials offsite.
2. Prepare roadside seeding area to a weed free and bare condition.
3. Bring area to uniform grade and install topsoil, soil amendments, or compost as specified. Any slopes 3(H) to 1(V) or steeper shall not be tilled unless otherwise specified.

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4. Compact to provide a reasonably firm but friable seedbed; tractor walk to uniformly cover the surface with longitudinal depressions at least 2 inches deep formed perpendicular to the natural flow of water on the slope. Condition the soil with sufficient water so the longitudinal depressions remain in the soil surface until completion of the seeding.
5. Seed and mulch within 2 days of preparation.

8-02.3(5)B Lawn Area Preparation

The Contractor shall prepare lawn areas as follows:

1. Prepare lawn area to a weed free and bare condition in accordance with Section 8-02.3(3)B.
2. Remove excess material, stumps, wood or rocks over 3 inches in diameter and remove from site.
3. Bring area to uniform grade and install topsoil or soil amendments in accordance with Section 8-02.3(4) and 8-02.3(6).
4. Till to an 8-inch depth, rake to a smooth even grade without low areas that trap water, and compact with a 50-pound roller. The finished grade of the soil shall be 1 inch below the top of all curbs, junction and valve boxes, walks, driveways, and other Structures.
5. Seed or sod the area within two days of preparation.

8-02.3(5)C Planting Area Preparation

The Contractor shall prepare planting areas as follows:

1. Prepare planting area to a weed free and bare condition in accordance with Section 8-02.3(3)B.
2. Decompact soil to a depth of 18 inches where construction activities have taken place or where native soils are compacted.
3. Return soil to uniform grade even with surrounding areas, leaving no holes or mounds over 3 inches in depth or height.
4. Remove excess material, stumps, wood or rocks over 3 inches in diameter and remove from site.
5. Apply compost or other amendments as indicated in the plans and in accordance with Section 8-02.3(6).
6. Cultivate amendments to a depth of 12 inches to provide a reasonably firm but friable planting area. Do not till any slopes 3(H) to 1(V) or steeper.
7. Return soil to a uniform finished grade, 1 inch, or the specified depth of mulch plus 1 inch, below walks, curbs, junction and valve boxes, catch basins, and driveways, unless otherwise specified.

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8. Begin planting and mulching the area within two days of final preparation.

8-02.3(6) Soil Amendments

The Contractor shall place soil amendments of the type, quality, and quantities specified where shown in the Plans or as specified in the Special Provisions. Areas receiving soil amendments shall be bare soil or vegetation free prior to application. All soil amendments shall be installed as shown in the Plans within 30 calendar days after delivery to the project site.

8-02.3(6)A Compost

Compost used for soil amendments shall be Fine Compost unless otherwise designated in the Plans. When compost blanket is used for temporary erosion control, the compost blanket may be incorporated into the soil immediately prior to planting when used as compost soil amendment. The area shall be prepared in accordance with Section 8-02.3(5) prior to placing compost.

8-02.3(6)B Fertilizers

The Contractor shall apply fertilizer in the form, mixture, and rate specified in the Special Provisions or as directed by the Engineer. Application procedures shall be in accordance with the manufacturer's recommendations unless otherwise specified in the Special Provisions.

The Contractor shall submit a guaranteed fertilizer analysis label for the selected product a minimum of one week prior to application for acceptance. Following the Engineer's acceptance, fertilizing of the accepted ground or vegetated surfaces shall begin immediately.

In seeding and lawn areas to be fertilized, the fertilizer shall be applied concurrently with the seed. When fertilizer is hydraulically applied, the fertilizer shall be suitable for application with seeding as specified in Section 8-02.3(9)C. If hydroseeding, the fertilizer shall be placed in the hydroseeder tank no more than 1 hour prior to application.

Fertilizers for planting areas shall be applied concurrently with compost and applied prior to incorporation, unless tablet form fertilizer is specified. Where tablet form fertilizer is specified, fertilizer shall be applied concurrently with plant installation.

Fertilizer sprayed on signs or sign structures shall be removed the same day.

Areas not accessible by fertilizing equipment shall be fertilized by allowed hand methods.

Second Application: A second application of fertilizer shall be applied as specified in the Special Provisions at the locations designated in the Plans. The fertilizer shall be applied during the months of March, April, or May of the following year after the initial seeding, planting, or lawn installation. The fertilizer shall be dry granular pellets or pearls and applied in accordance with the manufacturer's recommendations or as specified in the Special Provisions.

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8-02.3(7) Layout of Planting, Lawn and Seeding Areas

The Contractor shall lay out and prepare planting and lawn areas and receive the Engineer's acceptance of layout and preparation prior to any installation activities. The Contractor shall stake the location of all trees larger than 1-inch caliper and the perimeter of all planting areas for acceptance by the Engineer prior to any installation activities.

The Contractor shall locate all trees to be planted in mowable grass areas a minimum of 10 feet from the edge of planting areas, other trees, fence lines, and bottom of ditches unless otherwise specified.

Tree locations shown in the Plans shall be considered approximate unless shown with stationing and offset distance. In irrigated areas, trees shall be located so their trunk is a minimum of 1/3 of the spray radius away from the nearest sprinkler head.

Unless otherwise shown, planting areas located adjacent to Roadways shall begin 6 feet from the edge of shoulder on roadway fills and begin 5 feet up on the back slope from the bottom on roadway cut sections. Plants within planting areas shall be located such that mature branching pattern will not block sight distance, signs, or other traffic-related devices. No trees shall be placed where the mature canopy will grow to within 10 feet of existing power lines. Where roadside ditches are present, planting areas shall begin 5 feet from the centerline of the ditch unless shown otherwise in the Plans.

8-02.3(8) Planting

8-02.3(8)A Dates and Conditions for Planting

No plant material shall be planted until it has been inspected and accepted for planting by the Engineer. Rejected material shall be removed from the project site immediately. All plants for the project or a sufficient quantity to plant 1-acre of the site, whichever is less, shall be received on site prior to the Engineer beginning inspection of the plants.

Under no circumstances will planting be permitted during unsuitable soil or weather conditions as determined by the Engineer. Unsuitable conditions may include frozen soil, freezing weather, saturated soil, standing water, high winds, heavy rains, and high water levels. The ground shall be moist at the time of planting. All planting shall be accomplished during the following periods:

1. Non-Irrigated Plant Material
Western Washington (West of the Cascade Mountain Crest) – October 1 to March 1.
Eastern Washington (East of the Cascade Mountain Crest) – October 1 to November 15.
2. Irrigated Plant Material

In irrigated areas, plant material shall not be installed until the irrigation system is fully operational and accepted by the Engineer. Trees and shrubs may be planted in irrigated areas during the non-irrigated planting window before the irrigation system is functional with the written concurrence of the Engineer only if the irrigation system is guaranteed to be operational prior to the end of the non-irrigated planting window.

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8-02.3(8)B Plant Installation

The Contractor shall handle plant material in the following manner:

1. Root systems shall be kept covered and damp at all times. Plant material shall be kept in containers until the time of planting.
2. Roots shall not be bunched, curled, twisted, or unreasonably bent when placed in the planting hole. Bare root plant material shall be dormant at the time of harvesting and planting. The root systems of all bare root plant material shall be dipped in a slurry immediately prior to planting.
3. Plant material supplied in wrapped balls shall not be removed from the wrapping until the time of planting at the planting location. The root system of balled plant material shall be moist at the time of planting. Root balls shall be loosened prior to planting. All burlap, baskets, string, wire and other such materials shall be removed from the hole when planting balled plants.
4. Plant cutting material shall be dormant at the time of cutting and planting. All cuttings shall be installed immediately if buds begin to swell.
5. Plants shall be placed with the crown at the finished grade. In their final position, plants shall have their top true root (not adventitious root) no more than 1 inch below the soil surface, no matter where that root was located in the original root ball or container. The backfill material, including container and root ball soil, shall be thoroughly watered on the same day that planting occurs regardless of season.

When installing plants, the Contractor shall dig planting holes three times the diameter of the container or root ball size. Any glazed surface of the planting hole shall be roughened prior to planting.

8-02.3(8)C Pruning, Staking, Guying, and Wrapping

Plants shall be pruned at the time of planting, only to remove minor broken or damaged twigs, branches or roots. Pruning shall be performed with a sharp tool and shall be done in such a manner as to retain or to encourage natural growth characteristics of the plants. All other pruning shall be performed only after the plants have been in the ground at least 1 year and when plants are dormant.

Trees shall only be staked when so noted in the Plans. Each tree shall be staked or guyed before completion of the backfilling in accordance with the details shown in the Plans.

Trees shall be wrapped when so noted in the Plans.

8-02.3(9) Seeding, Fertilizing, and Mulching

For all seed, the Contractor shall furnish the following documentation to the Engineer:

1. The state or provincial seed dealer license and endorsements.

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- 2. Copies of Washington State Department of Agriculture (WSDA) test results on each lot of seed. Test results shall be within six months prior to the date of application.

8-02.3(9)A Dates for Application of Seed

Unless otherwise allowed by the Engineer, the Contractor shall apply seed for permanent erosion control during the following periods:

Western Washington¹ (West of the Cascade Mountain Crest)	Eastern Washington (East of the Cascade Mountain Crest)
March 1 through May 15 September 1 through October 1	October 1 through November 15
¹ Seeding may be allowed outside these dates when allowed by the Engineer.	

All roadway excavation and embankment ground surfaces that are completed to final grades shall be prepared and seeded during the first available seeding window. When environmental conditions are not conducive to satisfactory results, the Engineer may suspend the seeding Work until such time that the desired results are likely to be obtained. If seeding is suspended, temporary erosion control methods according to Section 8-01 shall be used to protect the bare soil until seeding conditions improve.

8-02.3(9)B Seeding and Fertilizing

The Contractor shall prepare the seeding area in accordance with Section 8-02.3(5)A and apply seed at the rate and mix specified in the Special Provisions. The Contractor shall notify the Engineer within 5 days in advance of any seeding operation and shall not begin the Work until areas prepared or designated for seeding have been accepted. Following the Engineer's acceptance, seeding of the accepted ground surfaces shall begin immediately.

Seeding shall not be done during windy weather or when the ground is frozen, or excessively wet.

When seeding by hand, the seed shall be incorporated into the top ¼ inch of soil by hand raking or other method that is allowed by the Engineer.

Seed applied as a separate operation using a hydroseeder shall have a tracer added to visibly aid uniform application. The tracer shall be HECF Short-Term Mulch applied at a rate of 200 to 250 pounds per acre and the tracer shall carry the measured specified seeding rate.

8-02.3(9)C Seeding with Fertilizers and Mulches

When the Proposal includes any variation of seeding, fertilizing, and without mulching, the seed and fertilizer shall be applied in one application followed by mulching. West of the Cascade Mountains, seed, fertilizer, and mulch may be completely applied in one application. East of the Cascades, seeding, fertilizing, and mulching shall not be applied as a single application unless allowed by the

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Engineer in writing prior to application. The fertilizing and mulching shall meet the requirements of Sections 8-02.3(6) and 8-02.3(11).

8-02.3(9)D Inspection

Seeded areas will be inspected upon completion of seeding, fertilizing, and mulching. The Work in any area will not be measured for payment until a uniform distribution of the materials is accomplished at the specified rate. Areas that have not received a uniform application of seed, fertilizer, and mulch at the specified rate, as determined by the Engineer, shall be re-seeded, re-fertilized, or re-mulched prior to payment for seeding within a designated area.

8-02.3(9)E Protection and Care of Seeded Areas

The Contractor shall install and establish a stable and weed free stand of grass as specified within all designated permanent seeding areas. A stable stand of grass shall meet the following requirements:

1. A dense and uniform canopy cover, 70% for Western Washington and 50% for Eastern Washington, of specified species covers all seeded areas after 3 months of active growth following germination during the growing season. Canopy cover is defined as the cover of living and vigorous grass blades, leaves, and shoots of specified species. Volunteer species, weeds, woody plants, or other undesirable vegetation shall not factor into the canopy cover. Growth and establishment may require supplemental irrigation to meet cover requirements.
2. Stand health is evident by vigorously growing planted species having a uniform rich-green appearance and with no dead patches or major gaps of growth. A stand of grass that displays rusting, wilting, stunted growth, disease, yellowing or browning of leaves, or bare patches does not meet the stand health requirement.
3. The Contractor shall establish a stable stand of grass free of all weeds, non-specified grasses, and other undesirable vegetation. Weed control shall be in accordance with the Weed and Pest Control Plan and occur on a monthly basis during the establishment period and through the life of the Contract.
4. Remove all trash, rocks, construction debris, and other obstructions that may be detrimental to the continued establishment of future seeding.

In addition to the requirements of Section 1-07.13(1), restoration of eroded areas including clean up, removal, and proper disposal of eroded material, filling and raking of eroded areas with Topsoil Type A or fine compost, and re-application of the specified seed, fertilizer, and mulch shall occur at no additional cost to the Contracting Agency.

8-02.3(10) Lawn Installation

8-02.3(10)A Dates and Conditions for Lawn Installation

In irrigated areas, lawn installation shall not begin until the irrigation system is fully operational.

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Unless otherwise allowed by the Engineer, seeded lawn installation shall be performed during the following time periods at the location shown:

Western Washington (West of the Cascade Mountain Crest)	Eastern Washington (East of the Cascade Mountain Crest)
March 1 through May 15 September 1 through October 1	October 1 through November 15
When irrigation system is operational March 1 through October 1	When irrigation system is operational March 1 through November 1

8-02.3(10)B Lawn Seeding and Sodding

The Contractor shall prepare the lawn area in accordance with Section 8-02.3(5) and apply seed at the mix and rate of application as specified in the Special Provisions.

The Contractor shall have the option of sodding in lieu of seeding for lawn installation at no additional expense to the Contracting Agency. Seeding in lieu of sodding will not be allowed.

Seed placed by hand shall be raked into the soil. Following raking, the seeded soil shall be rolled with a smooth 50-pound roller. Sod strips shall be placed within 48 hours of being cut. Placement shall be without voids and have the end joints staggered. Following placement, the sod shall be rolled with a smooth roller to establish contact with the soil.

Barriers shall be erected, with warning signs where necessary, to preclude pedestrian traffic access to the newly placed lawn during the establishment period.

8-02.3(10)C Lawn Establishment

Lawn establishment shall consist of caring for all new lawn areas within the limits of the project.

The lawn establishment period shall begin immediately after the lawn seeding or sodding has been accepted by the Engineer and shall extend to the end of four mowings or 20 working days whichever is longer. The mowings shall be done in accordance with Section 8-02.3(10)D.

During the lawn establishment period, the Contractor shall ensure the continuing healthy growth of the turf. This care shall include keeping the project in a presentable condition including, but not limited to, removal of litter, mowing, trimming, removal of grass clippings, edging, fertilization, insecticide and fungicide applications, weed control, watering, repairing the irrigation system, and repair and reseeding all damaged areas.

Temporary barriers shall be removed only when directed by the Engineer.

All Work performed under lawn establishment shall comply with established turf management practices.

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Acceptance of lawn planting as specified will be based on a uniform stand of grass and a uniform grade at the time of final inspection. The Contractor shall recultivate, re-grade, reseed, and refertilize areas that are bare or have a poor stand of grass or not having a uniform grade through any cause before final inspection at no additional cost to the Contracting Agency.

8-02.3(10)D Lawn Mowing

Lawn mowing shall begin immediately after the lawn establishment period has been accepted by the Engineer and shall extend to the end of the Contract or the first-year plant establishment, whichever is last.

The Contractor shall accomplish the following minimum requirements:

1. Mow, trim, and edge as often as conditions dictate, at a minimum, once per week between April and September. Maximum height of lawn shall not exceed 3 inches. The cutting height shall be 2 inches. Cuttings, trimmings, and edgings shall be disposed of off the project site. When the Engineer allows the use of a mulching mower, trimmings may be left in place.
2. Water as often as conditions dictate depending on weather and soil conditions.
3. Provide fertilizer, weed control, water, and other measures as necessary to establish and maintain a healthy stand of grass.

8-02.3(11) Mulch

Mulches associated with seeding and planting shall be of the type specified in the Special Provisions or as indicated in the Plans. The Contractor shall evenly apply mulch at the rates indicated in the Plans. Mulches shall not be placed below the anticipated water level of ditch slopes, pond bank slopes, and stream banks, or in areas of standing or flowing water.

8-02.3(11)A Mulch for Seeding Areas

The Contractor shall furnish and evenly apply Hydraulically Applied Erosion Control Product (HECP) Long Term Mulch at the rates indicated and in accordance with the Manufacturer's specifications unless otherwise specified.

HECP Long Term Mulch shall be hydraulically applied at the rate of 3500 pounds per acre with no more than 2000 pounds applied in any single lift. HECP mulch shall not be used within the Ordinary High Water Mark.

Mulch sprayed on signs or sign Structures shall be removed the same day.

Areas not accessible by mulching equipment shall be mulched by accepted hand methods.

HECP Long Term Mulch may be applied with seed and fertilizer west of the summit of the Cascade Range. East of the summit of the Cascade Range, seed and fertilizer shall be applied in a single application followed by the application of mulch.

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8-02.3(11)B Bark or Woodchip Mulch

The Contractor shall apply bark or wood chip mulch of the type and depth specified where shown in the Plans or as specified in the Special Provisions.

The Contractor shall complete final grading and placement/incorporation of soil amendments within the planting area prior to placement of mulch. Areas receiving bark mulch shall be bare soil or vegetation free before application, except where trees and other plants are specifically identified in the Plans or designated by the Engineer to be saved and protected.

Bark or wood chip mulch shall be placed to a uniform non-compacted depth of 3 inches over all planting areas unless otherwise specified. Mulch shall be feathered to the base of the plant and 1 inch below the top of junction and valve boxes, curbs, and pavement edges.

Any contamination of the mulch due to the Contractor's operations shall be corrected to its former condition at no additional cost to the Contracting Agency. Mulch placed to a thickness greater than specified shall be at no additional cost to the Contracting Agency.

The Contractor shall keep plant material crowns, runners, and branches free of mulch at all times.

8-02.3(11)C Bark or Woodchip Mulch Rings

The Contractor shall apply mulch rings around plants installed within existing vegetation areas or within seeded areas as shown in the Plans. Bark or wood chip mulch rings shall be applied to the surface of vegetation free amended soil in the isolated plant locations where shown in the Plans or as specified in the Special Provisions. Bark or wood chip mulch shall be placed to a uniform non-compacted depth of 3 inches to a radius of 2 feet around all plants within interplanted plant locations.

8-02.3(12) Completion of Initial Planting

Upon completion of the initial planting within a designated area, the Engineer will make an inspection of all planting areas. The Engineer will notify the Contractor, in writing, of any replacements or corrective action necessary to meet the plant installation requirements. The Contractor shall replace all plants and associated materials rejected or missing and correct unsatisfactory conditions.

Completion of the initial planting within a designated area includes the following conditions:

1. 100 percent of each of the plant material categories are installed as shown in the Plans.
2. Planting Area is cleaned up.
3. Repairs are completed, including but not limited to, full operation of the irrigation system.
4. Mulch coverage is complete.

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5. All weeds are controlled.

8-02.3(13) Plant Establishment

Plant establishment consists of caring for all plants and planting areas within the project limits. The provisions of Sections 1-07.13(2) and 1-07.13(3) do not apply to this Section.

When the Proposal includes the bid item PSIFE_____ (Plant Selection Including Plant Establishment), that bid item includes one year of plant establishment Work. The first year of plant establishment shall begin immediately upon written notification from the Engineer of the completion of initial planting for the project. The first-year plant establishment period shall be a minimum of one calendar year. The one calendar year shall be extended an amount equal to any periods where the Contractor does not comply with the plant establishment requirements and plan.

During the first-year plant establishment period, the Contractor shall perform all Work necessary to ensure the resumption and continued growth of the transplanted material. This Work shall include, but is not limited to, applying water, removing foreign, dead, or rejected plant material, maintaining all planting areas in a weed-free condition, and replacing all unsatisfactory plant material planted under the Contract. If plants are stolen or damaged by the acts of others, the Contracting Agency will pay invoice cost only for the replacement plants with no mark-up and the Contractor will be responsible for the labor to install the replacement plants. Other weed control within the project limits but outside of planting, lawn, or seeding areas shall be as specified in Section 8-02.3(3)C.

During the first year of plant establishment, the Contractor shall meet monthly or at an agreed upon schedule with the Engineer for the purpose of joint inspection of the planting material. The Contractor shall correct all unsatisfactory conditions identified by the Engineer within a 10-day period immediately following the inspection. If plant replacement is required, the Contractor shall, within the 10-day period, submit a plan and schedule for the plant procurement and replacement to occur during the planting period as designated in Section 8-02.3(8). At the end of the plant establishment period, plants that do not show normal growth shall be replaced and all staking and guying that remain on the project shall be removed unless otherwise allowed by the Engineer.

All automatic irrigation systems shall be operated fully automatic during the plant establishment period and until final acceptance of the Contract. Payment for water used to water in plants, or hand watering of plant material or lawn areas unless otherwise specified, is the responsibility of the Contractor during the first-year plant establishment period.

Subsequent year plant establishment periods shall begin immediately at the completion of the preceding year's plant establishment period. Each subsequent plant establishment period shall be one full calendar year in duration.

During the plant establishment period(s) after the first year plant establishment, the Work necessary for the continued healthy and vigorous growth of all plants material shall be performed as directed by the Engineer.

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Payment for water used to water plants during the subsequent year(s) of plant establishment will be paid under the plant establishment item.

8-02.3(14) Plant Replacement

The Contractor shall be responsible for growing or arrange to provide sufficient plants for replacement of all plant material rejected through first-year plant establishment. All replacement plant material shall be inspected and accepted by the Engineer prior to installation. All rejected plant material shall be replaced with acceptable plants meeting the specifications and installed according to the requirements of this Section at dates allowed by the Engineer.

All replacement plants shall be of the same species as the plants they replace and meet the requirements of Section 9-14.8 unless otherwise allowed by the Engineer. Plants may vary in size reflecting one season of growth should the Contractor elect to hold plant material under nursery conditions for an additional year to serve as replacement plants. Replacement plant material larger than specified in the Plans shall meet the applicable section requirements of the ASNS for container class, ball size, spread, and branching characteristics.

8-02.3(15) Bioengineering

Bioengineering consists of using plant materials for the purpose of streambank or earthen slope construction and surface stabilization. This Work may include installing woody plant cuttings in various forms as well as part of streambank or earthen slope construction.

8-02.3(15)A Fascines

Live fascines shall be constructed of live and dead cuttings bundled together with a diameter of 8 to 18 inches. Live cuttings shall be the species shown in the Plans. Dead branches may be cuttings from any woody, non-invasive plant native to the project area. Dead branches may be placed within the live fascine and on the side exposed to the air. Live branches shall be placed in contact with the soil along their entire length. Each live fascine must contain a minimum of eight live branches. Dead branches shall constitute no more than 40 percent of the total fascine content.

The total length of each live fascine shall be a minimum of 5 feet. Branches shall be bundled into log-like forms and bound with biodegradable twine spaced at 1-foot intervals along the entire length of the live fascine. Live fascines shall be installed horizontally in a trench whose depth shall be 1/2 the diameter of the live fascine. Secure the live fascine with live stakes 3 feet in length and 3/4 inch in diameter placed at 18-inch intervals. A minimum of three live stakes shall be used per fascine. The live stakes shall be driven through the live fascine vertically into the slope. The ends of live fascines shall be woven together so that no gap remains between the two sections of the live fascine.

Prior to being covered with soil, the fascine shall be thoroughly watered. Once the fascine is covered with 6 inches of soil, the soil covering the fascine shall be thoroughly watered.

When used to remedy erosion areas, live fascines shall extend a minimum of two feet beyond the visible area of erosion and soil disturbance. The locations for live fascines and live stake rows shall be identified in the field for review and

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acceptance by the Engineer. The Engineer may require adjustment of fascine locations prior to installation in order to best accomplish the intended functions.

Plant replacement during plant establishment for "PSIPE Live Fascine" will be required for any section void of live shoots for a length of 3 feet or more. Replacement shall consist of installing live stakes, spaced 1 foot apart above the fascine within the area void of live shoots. Live stakes shall be of the same species as the live fascine and shall have a minimum length of 3 feet and a minimum diameter of 3/4 inch. The requirements of Section 8-02.3(8) apply to PSIPE Live Fascine.

8-02.3(15)B Brush Mattress

Live brush mattress shall be constructed of live branch cuttings, live poles, jute rope and topsoil. The live cuttings and live poles shall be from the plant species designated in the Plans. Live branch cuttings shall be placed with the cut ends oriented down slope as shown in the Plans. Cuttings shall overlap from side to side and from top to bottom as each layer is constructed. The live branches in each succeeding upper layer shall overlap the adjacent lower layer by a minimum of 6 inches. A maximum of 20 percent of the branches may be dead branches, but the live branches shall be distributed evenly to provide even rooting and growth over the entire area of the brush mattress.

The Contractor shall anchor the live brush mattress to the slope using stakes and jute rope as shown in the Plans. Initially, the stakes shall be installed to protrude above the live brush mattress. The Contractor shall attach the jute rope to the stakes and tighten the rope by tamping the stakes further into the bank, pulling the live brush mattress tight against the soil surface. The Contractor shall cover the live brush mattress with sufficient stockpiled topsoil to ensure good soil contact with the live plant material.

Plant replacement during plant establishment for "PSIPE Live Brush Mattress" will be required for any section void of live shoots for an area of 25 square feet or more. Replacement shall consist of installing live stakes, spaced 3 feet apart in a triangular pattern within the area void of live shoots. Live stakes shall be of the same species as the live brush mattress and shall have a minimum length of 3 feet and a minimum diameter of 3/4 inch. The requirements of Section 8-02.3(8) apply to PSIPE Brush Mattress.

8-02.3(15)C Brush Layer

Brush layers shall be constructed of live branch cuttings, randomly mixed, from the plant species listed under the brush layer heading in the Plans. The number of branches required will vary depending on the average branch diameter and layer thickness.

Brush layers shall be placed in a trench dug at a 45 degree incline into the slope or stream bank. Two-thirds to three-fourths of the length of the live branches shall be buried. Soil shall be firmly tamped in place. Succeeding layers shall be spaced as detailed in the Plans. Brush layer placed in stream banks shall be angled downstream.

Brush layers may include plant establishment when designated as PSIPE Brush Layer. Plant replacement for PSIPE Brush Layer will be required for each section

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void of live shoots for a continuous distance of 3 feet or more. The requirements of Section 8-02.3(8) apply to PSIFE Brush Layer.

8-02.3(16) Roadside Maintenance Under Construction

When the Contract includes the item, Roadside Maintenance Under Construction, this Work includes roadside mowing and ditch maintenance, and noxious weed control outside of planting areas according to Section 8-02.3(3)C.

8-02.3(16)A Roadside Mowing

The Contractor shall mow designated roadside grass areas to the limits designated by the Engineer. Roadside mowing is limited to slopes not steeper than 3(H) to 1(V).

The Contractor shall mow according to the following requirements:

1. Trim around traffic equipment, structures, planting areas, or other features extending above ground preceding or simultaneously with each mowing.
2. Maintain grass between 4 and 12 inches in height.
3. Operate mowing equipment with suitable guards to prevent throwing rocks or debris onto the traveled way or off of the Contracting Agency property. Power driven equipment shall not cause ruts, deformation, and compaction of the vegetated soil.
4. Removing clippings is required on the traveled way, shoulders, walkways, or Structures.
5. Restore soil rutting to a smooth and even grade at the direction of the Engineer.

8-02.3(16)B Ditch Maintenance

The Contractor shall maintain drainage for the duration of the Contract according to the following requirements:

1. Maintain flow lines in drainage channels and roadside ditches.
2. Cutting or trimming vegetation within drainage channels to maintain positive flow.
3. Remove dirt and debris from inside of culverts or any drainage area where runoff has allowed accumulations and re-seed for erosion control.
4. Restore channels to previous operational condition.

8-02.4 Measurement

Topsoil, bark or woodchip mulch and soil amendments will be measured by the acre or the square yard along the grade and slope of the area covered immediately after placement. Weed control pre-treatment of topsoil areas, excavation, and stockpiling are included in the bid item "Topsoil Type ____."

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2 Bark or woodchip mulch rings will be measured per each.
3
4 Compost will be measured by the acre or the square yard along the grade and slope of
5 the area covered immediately after application.
6
7 Seeding, fertilizing, and mulching will be measured by the acre or the square yard by
8 ground slope measurement or through the use of design data.
9
10 Seeding and fertilizing by hand will be measured by the square yard. No adjustment in
11 area size will be made for the vegetation free zone around each plant.
12
13 Seeded lawn, sod installation, and lawn mowing will be measured along the ground slope
14 and computed in square yards of actual lawn completed, established, and accepted.
15
16 Plant selection will be measured per each.
17
18 PSIFE __ (Plant Selection Including Plant Establishment) will be measured per each.
19
20 Live Pole will be measured per each.
21
22 Live Stake Row will be measured by the linear foot along the ground slope line.
23
24 The pay quantities for plant materials will be determined by count of the number of
25 satisfactory plants in each category accepted by the Engineer.
26
27 Fascine and PSIFE live fascine will be measured by the linear foot along the ground slope
28 line.
29
30 Brush mattress and PSIFE live brush mattress will be measured by the surface square
31 yard along the ground slope line.
32
33 Brush layer and PSIFE brush layer will be measured by the linear foot along the ground
34 slope line.
35
36 Water will be measured in accordance with Section 2-07.4. Measurement will be made of
37 only that water hauled in tank trucks or similar equipment.
38
39 **8-02.5 Payment**
40 Payment will be made for each of the following listed Bid items that are included in the
41 Proposal:
42
43 "Project Area Weed and Pest Control" will be paid in accordance with Section 1-09.6.
44 For the purpose of providing a common Proposal for all Bidders, the Contracting
45 Agency entered an amount for "Project Area Weed and Pest Control" in the Proposal
46 to become a part of the total Bid by the Contractor. Payment under this item will be
47 made only when the Work is not already covered by other items.
48
49 "Topsoil Type ____", per acre.
50 The unit Contract price per acre for "Topsoil Type ____" shall be full payment for all
51 costs for the specified Work.
52

1 "Fine Compost ", per acre or per square yard.
2 "Medium Compost", per acre or per square yard.
3 "Coarse Compost", per acre or per square yard.
4 The unit Contract price per acre for "Fine Compost", "Medium Compost" or "Coarse
5 Compost" shall be full pay for furnishing and spreading the compost onto the existing
6 soil.
7
8 "Soil Amendment", per acre.
9 The unit Contract price per acre for "Soil Amendment" shall be full pay for furnishing
10 and incorporating the soil amendment into the existing soil.
11
12 "Plant Selection ____", per each.
13 The unit Contract price for "Plant Selection ____", per each shall be full pay for all
14 Work to perform the work as specified within the planting area prior to planting for
15 weed control, planting area preparation and installation of plants with initial watering.
16
17 As the plants that do not include plant establishment are obtained, propagated, and
18 grown, partial payments will be made as follows:
19
20 Payment of 15 percent of the unit Contract price per each when the plant
21 materials have been contracted, propagated, and are growing under nursery
22 conditions. The Contractor shall provide the Engineer with certification that the
23 plant material has been procured or contracted for delivery to the project for
24 planting within the time limits of the project. The certification shall state the
25 location, quantity, and size of all material.
26
27 Payment will be increased to 100 percent of the unit Contract price per each for
28 contracted plant material at the completion of the initial planting.
29
30 All partial payments shall be limited to the actual number of healthy vigorous
31 plants that meet the stage requirements, limited to plan quantity. Previous partial
32 payments made for materials rejected or missing will be deducted from future
33 payments due the Contractor.
34
35 "PSIPE ____", per each.
36 The unit Contract price for "PSIPE ____", per each, shall be full pay for all Work
37 necessary to perform as specified within the planting area for weed control and
38 planting area preparation, planting, cleanup, and water necessary to complete
39 planting operations as specified to the end of first year plant establishment.
40
41 As the plants that include plant establishment are obtained, propagated, and grown,
42 partial payments will be made as follows after inspection by the Engineer:
43
44 Payment of 5 percent of the unit Contract price, per each, when the plant
45 materials have been contracted, propagated, and are growing under nursery
46 conditions. The Contractor shall provide the Engineer with certification that the
47 plant material has been procured or contracted for delivery to the project for
48 planting within the time limits of the project. The certification shall state the
49 location, quantity, and size of all material.
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51 Payment will be increased to 15 percent of the unit Contract price, per each,
52 upon completion of the initial weed control and planting area preparation Work.

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Payment will be increased to 60 percent of the unit Contract price per each for the contracted plant material in a designated unit area when planted.

Payment will be increased to 70 percent of the unit Contract price per each for contracted plant material at the completion of the initial planting.

Payment will be increased to the appropriate percentage upon reaching the following plant establishment milestones:

June 30th	80 percent
September 30th	90 percent
Completion of first-year plant establishment or after all replacement plants have been installed, whichever is later.	100 percent

Plant establishment milestones are achieved when planting areas meet conditions described in Section 8-02.3(13).

“Seeding, Fertilizing and Mulching”, per acre.

“Seeding and Fertilizing”, per acre or per square yard.

“Seeding and Fertilizing by Hand”, per square yard.

“Second Application of Fertilizer”, per acre.

“Seeding and Mulching”, per acre.

“Seeded Lawn Installation”, per square yard.

“Sod Installation”, per square yard.

“Lawn Mowing”, per square yard.

The unit Contract price per square yard for “Seeded Lawn Installation” or “Sod Installation” shall be full pay for all costs necessary to prepare the area, plant or sod the lawn, erect barriers, control weeds, and establish lawn areas and for furnishing all labor, tools, equipment, and materials necessary to complete the Work as specified and shall be paid in the following sequence for healthy, vigorous lawn:

Completion of Lawn Planting	60 percent of individual areas
Mid Lawn Establishment (after two mowings)	85 percent of individual areas
Completion of Lawn Establishment (after four mowings)	100 percent of individual areas

“Plant Establishment Year ____” will be paid in accordance with Section 1-09.6. For the purpose of providing a common Proposal for all Bidders, the Contracting Agency entered an amount for “Plant Establishment - ____ Year” in the Proposal to become a part of the total Bid by the Contractor.

1 "Live Pole", per each.
2
3 "Live Stake Row", per linear foot.
4
5 "Bark or Wood Chip Mulch", per acre.
6
7 "Bark or Wood Chip Mulch Rings", per each.
8 The unit Contract price per acre for "Bark or Wood Chip Mulch" shall be full pay for
9 furnishing and spreading the mulch onto the existing soil.
10
11 "Fascine" and "PSIPE Live Fascine", per linear foot.
12 "Brush Mattress" and "PSIPE Live Brush Mattress", per square yard.
13 "Brush Layer" and "PSIPE Brush Layer", per linear foot.
14 When PSIPE is included with Fascine, Brush Mattress, or Brush Layer, the payment
15 schedule for PSIPE ____ will apply.
16
17 "Roadside Maintenance under Construction" will be paid in accordance with Section
18 1-09.6.
19 For the purpose of providing a common Proposal for all Bidders, the Contracting
20 Agency has entered an amount for "Roadside Maintenance Under Construction" in
21 the Proposal to become a part of the total Bid by the Contractor.
22
23 "Water", per M Gal.
24
25

26 **Section 8-04, Curbs, Gutters, and Spillways**
27 **April 2, 2018**

28 **8-04.2 Materials**

29 In the first paragraph, the reference to "Portland Cement" is revised to read:

30
31 Cement 9-01
32

33 **8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways**

34 The first paragraph is supplemented with the following:

35
36 Roundabout truck apron cement concrete curb and gutter shall be constructed with air
37 entrained concrete Class 4000 conforming to the requirements of Section 6-02.
38

39 **Section 8-06, Cement Concrete Driveway Entrances**
40 **April 2, 2018**

41 **8-06.2 Materials**

42 In the first paragraph, the reference to "Portland Cement" is revised to read:

43
44 Cement 9-01
45

46 **8-06.3 Construction Requirements**

47 The first paragraph is revised to read:

48
49 Cement concrete driveway approaches shall be constructed with air entrained concrete
50 Class 4000 conforming to the requirements of Section 6-02 or Portland Cement or

1 Blended Hydraulic Cement Concrete Pavement conforming to the requirements of
2 Section 5-05.

3
4 **Section 8-07, Precast Traffic Curb**
5 **April 2, 2018**

6 **8-07.3(1) Installing Curbs**

7 The first sentence of the first paragraph is revised to read:

8
9 The curb shall be firmly bedded for its entire length and breadth on a mortar bed
10 conforming to Section 9-20.4(3) composed of one part Portland cement or blended
11 hydraulic cement and two parts sand.

12
13 The fourth paragraph is revised to read:

14
15 All joints between adjacent pieces of curb except joints for expansion and/or drainage as
16 designated by the Engineer shall be filled with mortar composed of one part Portland
17 cement or blended hydraulic cement and two parts sand.

18
19 **Section 8-11, Guardrail**
20 **April 1, 2019**

21 **8-11.3(1)A Erection of Posts**

22 The first sentence of the first paragraph is revised to read:

23
24 Posts shall be set to the true line and grade of the Highway after the grade is in place and
25 compaction is completed.

26
27 **8-11.3(1)C Terminal and Anchor Installation**

28 The first paragraph is revised to read:

29
30 All excavation and backfilling required for installation of anchors shall be performed in
31 accordance with Section 2-09, except that the costs thereof shall be included in the unit
32 Contract price for the anchor installed.

33
34 The first sentence of the second to last paragraph is revised to read:

35
36 Assembly and installation of Beam Guardrail Non-flared Terminals for Type 31 guardrail
37 shall be supervised at all times by a manufacturer's representative, or an installer who
38 has been trained and certified by the manufacturer.

39
40 The last paragraph is revised to read:

41
42 Beam Guardrail Non-flared Terminals for Type 31 guardrail shall meet the crash test and
43 evaluation criteria in the Manual for Assessing Safety Hardware (MASH).

44
45 **8-11.4 Measurement**

46 The third paragraph is revised to read:

47
48 Measurement of beam guardrail _____ terminal will be per each for the
49 completed terminal.

50

1 The fourth paragraph is revised to read:

2

3 Measurement of beam guardrail Type 31 buried terminal Type 2 will be per linear foot for
4 the completed terminal.

5

6 The sixth paragraph is revised to read:

7

8 Measurement of beam guardrail anchor Type 10 will be per each for the completed
9 anchor, including the attachment of the anchor to the guardrail.

10

11 **8-11.5 Payment**

12 The Bid item "Beam Guardrail Anchor Type ____", per each is revised to read "Beam Guardrail
13 Anchor Type 10", per each.

14

15 The Bid item "Beam Guardrail Buried Terminal Type 1", per each is deleted from this section.

16

17 The Bid item "Beam Guardrail Buried Terminal Type 2", per linear foot and the following
18 paragraph are revised to read:

19

20 "Beam Guardrail Type 31 Buried Terminal Type 2", per linear foot.

21

22 The unit Contract price per linear foot for "Beam Guardrail Type 31 Buried Terminal Type
23 2" shall be full payment for all costs to obtain and provide materials and perform the Work
24 as described in Section 8-11.3(1)C.

25

26 **Section 8-14, Cement Concrete Sidewalks**

27 **April 2, 2018**

28 **8-14.2 Materials**

29 In the first paragraph, the reference to "Portland Cement" is revised to read:

30

31 Cement 9-01

32

33 In the second paragraph, each reference to "Federal Standard 595" is revised to read "SAE
34 AMS Standard 595".

35

36 **Section 8-16, Concrete Slope Protection**

37 **April 2, 2018**

38 **8-16.2 Materials**

39 In the first paragraph, the last two material references are revised to read:

40

41 Poured Portland Cement or Blended Hydraulic Cement
42 Concrete Slope Protection 9-13.5(2)

43 Pneumatically Placed Portland Cement or Blended

44 Hydraulic Cement Concrete Slope Protection 9-13.5(3)

45

1 **Section 8-17, Impact Attenuator Systems**
2 **January 7, 2019**

3 **8-17.3 Construction Requirements**

4 This section is supplemented with the following:

5
6 Permanent impact attenuators shall meet the crash test and evaluation criteria of the
7 Manual for Assessing Safety Hardware (MASH), except as otherwise noted in the Plans
8 or Special Provisions.
9

10 **Section 8-20, Illumination, Traffic Signal Systems, Intelligent Transportation**
11 **Systems, and Electrical**
12 **August 6, 2018**

13 **8-20.1(1) Regulations and Code**

14 The last paragraph is revised to read:

15
16 Persons performing electrical Work shall be certified in accordance with and supervised
17 as required by RCW 19.28.161. Proof of certification shall be worn at all times in
18 accordance with WAC 296-46B-942. Persons failing to meet these certification
19 requirements may not perform any electrical work, and shall stop any active electrical
20 work, until their certification is provided and worn in accordance with this Section.
21

22 **8-20.2(2) Equipment List and Drawings**

23 This section is renumbered:

24
25 **8-20.2(1) Equipment List and Drawings**
26

27 **8-20.3(4) Foundations**

28 The second sentence of the first paragraph is revised to read:

29
30 Concrete for Type II, III, IV, V, and CCTV signal standards and light standard foundations
31 shall be Class 4000P and does not require air entrainment.
32

33 **8-20.3(5)A General**

34 The last two sentences of the last paragraph is deleted.

35
36 This section is supplemented with the following:

37
38 All conduits shall include a pull tape with the equipment grounding conductor. The pull
39 tape shall be attached to the conduit near the end bell or grounded end bushing, or to
40 duct plugs or caps if present, at both ends of the conduit.
41

42 **8-20.3(8) Wiring**

43 The seventeenth paragraph is supplemented with the following:

44
45 Pulling tape shall meet the requirements of Section 9-29.1(10). Pull string may not be
46 used.
47

48 **8-20.3(14)C Induction Loop Vehicle Detectors**

49 Item number 2 is deleted.

1
2 Item numbers 3 through 12 are renumbered to 2 through 11, respectively.

3
4 **Section 8-21, Permanent Signing**
5 **January 7 2019**

6 **8-21.3(5) Sign Relocation**

7 The second sentence of the first paragraph is revised to read:

8
9 Where the existing sign Structure is mounted on concrete pedestals, the Contractor shall
10 remove the pedestal to a minimum of 2 feet below finished grade and backfill the
11 remaining hole with material similar to that surrounding the hole.

12
13 **8-21.3(9)F Foundations**

14 Item number 3 of the twelfth paragraph is supplemented with the following new sentence:

15
16 Class 4000P concrete for roadside sign structures does not require air entrainment.

17
18 **Section 8-22, Pavement Marking**
19 **January 7, 2019**

20 **8-22.3(2) Preparation of Roadway Surfaces**

21 The second paragraph is revised to read:

22
23 Remove all other contaminants from pavement surfaces that may adversely affect the
24 installation of new pavement marking.

25
26 **8-22.3(3)F Application Thickness**

27 The second to last sentence of the last paragraph is revised to read:

28
29 After grinding, clean the groove.

30
31 **Section 9-00, Definitions and Tests**
32 **January 7, 2019**

33 **9-00.4 Sieves for Testing Purposes**

34 This section is revised to read:

35
36 Test sieves shall be made of either: (1) woven wire cloth conforming to ASTM E11, or (2)
37 square-hole, perforated plates conforming to ASTM E323.

38
39 **9-00.7 Galvanized Hardware, AASHTO M 232**

40 The first sentence is revised to read:

41
42 An acceptable alternate to hot-dip galvanizing in accordance with AASHTO M 232 will be
43 zinc coatings mechanically deposited in accordance with ASTM B695, providing the
44 minimum thickness of zinc coating is not less than that specified in AASHTO M 232, and
45 the process will not produce hydrogen embrittlement in the base metal.

46

1 **Section 9-02, Bituminous Materials**

2 **January 7, 2019**

3 **9-02.1 Asphalt Material, General**

4 The second paragraph is revised to read:

5

6 The Asphalt Supplier of Performance Graded (PG) asphalt binder and emulsified asphalt
7 shall have a Quality Control Plan (QCP) in accordance with WSDOT QC 2 “Standard
8 Practice for Asphalt Suppliers That Certify Performance Graded and Emulsified Asphalts”.
9 The Asphalt Supplier’s QCP shall be submitted and receive the acceptance of the
10 WSDOT State Materials Laboratory. Once accepted, any change to the QCP will require
11 a new QCP to be submitted for acceptance. The Asphalt Supplier of PG asphalt binder
12 and emulsified asphalt shall certify through the Bill of Lading that the PG asphalt binder
13 or emulsified asphalt meets the Specification requirements of the Contract.
14

15 **9-02.1(4) Performance Graded Asphalt Binder (PGAB)**

16 This section’s title is revised to read:

17

18 **Performance Graded (PG) Asphalt Binder**

19

20 The first paragraph is revised to read:

21

22 PG asphalt binder meeting the requirements of AASHTO M 332 Table 1 of the grades
23 specified in the Contract shall be used in the production of HMA. For HMA with greater
24 than 20 percent RAP by total weight of HMA, or any amount of RAS, the new asphalt
25 binder, recycling agent and recovered asphalt (RAP and/or RAS) when blended in the
26 proportions of the mix design shall meet the PG asphalt binder requirements of AASHTO
27 M 332 Table 1 for the grade of asphalt binder specified by the Contract.
28

29 The second paragraph, including the table, is revised to read:

30

31 In addition to AASHTO M 332 Table 1 specification requirements, PG asphalt binders
32 shall meet the following requirements:
33

		Additional Requirements by Performance Grade (PG) Asphalt Binders					
Property	Test Method	PG58S -22	PG58H -22	PG58V- 22	PG64S- 28	PG64H -28	PG64V- 28
RTFO Residue: Average Percent Recovery @ 3.2 kPa	AASHTO T 350 ¹			30% Min.	20% Min.	25% Min.	30% Min.
¹ Specimen conditioned in accordance with AASHTO T 240 – RTFO.							

34

35 The third paragraph is revised to read:

36

1 The RTFO J_{nriff} and the PAV direct tension specifications of AASHTO M 332 are not
2 required.

3
4
5 **9-02.1(6) Cationic Emulsified Asphalt**

6 This section is revised to read:

7
8 Cationic Emulsified Asphalt meeting the requirements of AASHTO M 208 Table 1 of the
9 grades specified in the Contract shall be used.

10
11 **9-02.5 Warm Mix Asphalt (WMA) Additive**

12 This section, including title, is revised to read:

13
14 **9-02.5 HMA Additive**

15 Additives for HMA shall be accepted by the Engineer.

16
17 **Section 9-03, Aggregates**
18 **January 7, 2019**

19 **9-03.1 Aggregates for Portland Cement Concrete**

20 This section's title is revised to read:

21
22 **Aggregates for Concrete**

23
24 **9-03.1(1) General Requirements**

25 The first two sentences of the first paragraph are revised to read:

26
27 Concrete aggregates shall be manufactured from ledge rock, talus, or sand and gravel in
28 accordance with the provisions of Section 3-01. Reclaimed aggregate may be used if it
29 complies with the specifications for concrete.

30
31 The second paragraph (up until the colon) is revised to read:

32
33 Aggregates for concrete shall meet the following test requirements:

34
35 The second sentence of the second to last paragraph is revised to read:

36
37 The Contractor shall submit test results according to ASTM C1567 through the Engineer
38 to the State Materials Laboratory that demonstrate that the proposed fly ash when used
39 with the proposed aggregates and cement will control the potential expansion to 0.20
40 percent or less before the fly ash and aggregate sources may be used in concrete.

41
42 **9-03.1(2) Fine Aggregate for Portland Cement Concrete**

43 This section's title is revised to read:

44
45 **Fine Aggregate for Concrete**

46
47 **9-03.1(4) Coarse Aggregate for Portland Cement Concrete**

48 This section's title is revised to read:

49

1 **Coarse Aggregate for Concrete**

2

3 **9-03.1(4)C Grading**

4 The first paragraph (up until the colon) is revised to read:

5

6 Coarse aggregate for concrete when separated by means of laboratory sieves shall
7 conform to one or more of the following gradings as called for elsewhere in these
8 Specifications, Special Provisions, or in the Plans:

9

10 **9-03.1(5) Combined Aggregate Gradation for Portland Cement Concrete**

11 This section's title is revised to read:

12

13 **Combined Aggregate Gradation for Concrete**

14

15 **9-03.1(5)B Grading**

16 In the last paragraph, "WSDOT FOP for WAQTC/AASHTO T 27/T 11" is revised to read "FOP
17 for WAQTC/AASHTO T 27/T 11".

18

19 **9-03.2 Aggregate for Job-Mixed Portland Cement Mortar**

20 This section's title is revised to read:

21

22 **Aggregate for Job-Mixed Portland Cement or Blended Hydraulic Cement
23 Mortar**

24

25 The first sentence of the first paragraph is revised to read:

26

27 Fine aggregate for portland cement or blended hydraulic cement mortar shall consist of
28 sand or other inert materials, or combinations thereof, accepted by the Engineer, having
29 hard, strong, durable particles free from adherent coating.

30

31 **9-03.4(1) General Requirements**

32 The first paragraph (up until the colon) is revised to read:

33

34 Aggregate for bituminous surface treatment shall be manufactured from ledge rock, talus,
35 or gravel, in accordance with Section 3-01. Aggregates for Bituminous Surface Treatment
36 shall meet the following test requirements:

37

38 **9-03.8(1) General Requirements**

39 The first paragraph (up until the colon) is revised to read:

40

41 Aggregates for Hot Mix Asphalt shall meet the following test requirements:

42

43 **9-03.8(2) HMA Test Requirements**

44 The two tables in the second paragraph are replaced with the following three tables:

45

Mix Criteria	HMA Class							
	3/8 inch		1/2 inch		3/4 inch		1 inch	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Voids in Mineral Aggregate (VMA), %	15.0		14.0		13.0		12.0	
Voids Filled With Asphalt (VFA), %								

ESAL's (millions)	VFA							
	70	80	70	80	70	80	67	80
< 0.3	70	80	70	80	70	80	67	80
0.3 to < 3	65	78	65	78	65	78	65	78
≥ 3	73	76	65	75	65	75	65	75
Dust/Asphalt Ratio	0.6	1.6	0.6	1.6	0.6	1.6	0.6	1.6

1

Test Method	ESAL's (millions)	Number of Passes
Hamburg Wheel-Track Testing, FOP for AASHTO T 324 Minimum Number of Passes with no Stripping Inflection Point and Maximum Rut Depth of 10mm	< 0.3	10,000
	0.3 to < 3	12,500
	≥ 3	15,000
Indirect Tensile (IDT) Strength (psi) of Bituminous Materials FOP for ASTM D6931		175 Maximum

2

	ESAL's (millions)	N initial	N design	N maximum
% Gmm	< 0.3	≤ 91.5	96.0	≤ 98.0
	0.3 to < 3	≤ 90.5	96.0	≤ 98.0
	≥ 3	≤ 89.0	96.0	≤ 98.0
Gyratory Compaction (number of gyrations)	< 0.3	6	50	75
	0.3 to < 3	7	75	115
	> 3	8	100	160

3

4

9-03.8(7) HMA Tolerances and Adjustments

5

In the table in item number 1, the fifth row is revised to read:

6

Asphalt binder	-0.4% to 0.5%		±0.7%
----------------	---------------	--	-------

7

8

In the table in item number 1, the following new row is inserted before the last row:

9

Voids in Mineral Aggregate, VMA	-1.0%		
---------------------------------	-------	--	--

10

11

9-03.9(1) Ballast

12

The second paragraph (up until the colon) is revised to read:

13

14

Aggregates for ballast shall meet the following test requirements:

15

16

9-03.14(4) Gravel Borrow for Structural Earth Wall

17

The second sentence of the first paragraph is revised to read:

18

19

The material shall be substantially free of shale or other soft, poor durability particles, and shall not contain recycled materials, such as glass, shredded tires, concrete rubble, or asphaltic concrete rubble.

20

21

22

23

9-03.21(1)B Recycled Concrete Aggregate Approval and Acceptance

24

The first sentence of the second paragraph is revised to read:

25

1 Recycled concrete aggregate may be used as coarse aggregate or blended with coarse
 2 aggregate for Commercial Concrete, Class 3000 concrete, or Cement Concrete
 3 Pavement.

4
 5 Item number 4 of the second paragraph is revised to read:

6
 7 4. For Cement Concrete Pavement mix designs using recycled concrete aggregates,
 8 the Contractor shall submit evidence that ASR mitigating measures control
 9 expansion in accordance with Section 9-03.1(1).

10
 11 This section is supplemented with the following new subsection:

12
 13 **9-03.21(1)B1 Recycled Concrete Aggregate Approval and Acceptance**

14 Recycled concrete aggregate may be approved through a three tiered system that
 15 consists of the following:
 16

Tier 1	
Approval Requirements	Approval of the Reclamation Facility is not required.
Acceptance Requirements	Certification of toxicity characteristics in accordance with Section 9-03.21(1). Field acceptance testing in accordance with Section 3-04.
Approved to provide the following Aggregate Materials:	
9-03.10 Aggregate for Gravel Base 9-03.12(1)B Gravel Backfill for Foundations Class B 9-03.12(2) Gravel Backfill for Walls 9-03.12(3) Gravel Backfill for Pipe Zone Bedding 9-03.14(1) Gravel Borrow 9-03.14(2) Select Borrow 9-03.14(2) Select Borrow (greater than 3 feet below subgrade and side slope) 9-03.14(3) Common Borrow 9-03.14(3) Common Borrow (greater than 3 feet below subgrade and side slope) 9-03.17 Foundation Material Class A and Class B 9-03.18 Foundation Material Class C 9-03.19 Bank Run Gravel for Trench Backfill	

17

Tier 2	
Approval Requirements	The Reclamation Facility shall have a Quality Control Plan (QCP) in accordance with WSDOT QC 9 "Standard Practice for Approval of Reclamation Facilities of WSDOT Recycled Concrete and Returned Concrete". The Reclamation Facility's QCP shall be submitted and approved by the WSDOT State Materials Laboratory. Once accepted, any changes to the QCP will require a new QCP to be submitted for acceptance. Evaluation of aggregate source properties (LA Wear and Degradation) for the recycled concrete aggregate is not required.

Acceptance Requirements	<p>Certification of toxicity characteristics in accordance with Section 9-03.21(1), required if requested.</p> <p>Field acceptance testing in accordance with Section 3-04 is required.</p> <p>Provide certification in accordance with WSDOT QC 9 for every lot. A lot shall be no larger than 10,000 tons.</p>
Approved to provide the following Aggregate Materials:	
<p>Tier 1 aggregate materials</p> <p>9-03.1 Coarse Aggregate for Commercial Concrete or Concrete class 3000</p> <p>9-03.9(1) Ballast</p> <p>9-03.9(2) Permeable Ballast</p> <p>9-03.9(3) Crushed Surfacing</p> <p>9-03.12(1)A Gravel Backfill for Foundations Class A</p>	

1

Tier 3	
Approval Requirements	<p>The Reclamation Facility shall have a Quality Control Plan (QCP) in accordance with WSDOT QC 10 "Standard Practice for Approval of Reclamation Facilities of Recycled Concrete Aggregates from Stockpiles of Unknown Sources". The Reclamation Facility's QCP shall be submitted and approved by the WSDOT State Materials Laboratory. Once accepted, any changes to the QCP will require a new QCP to be submitted for acceptance.</p> <p>Evaluation of aggregate source properties (LA Wear and Degradation) for the recycled concrete aggregate is required.</p>
Acceptance Requirements	<p>Certification of toxicity characteristics in accordance with Section 9-03.21(1) is required.</p> <p>Field acceptance testing in accordance with Section 3-04 is required.</p> <p>Provide certification in accordance with WSDOT QC 10 for every lot. A lot shall be no larger than 10,000 tons</p>
Approved to provide the following Aggregate Materials:	
<p>Tier 1 aggregate materials</p> <p>9-03.1 Coarse Aggregate for Commercial Concrete or Concrete class 3000</p> <p>9-03.9(1) Ballast</p> <p>9-03.9(2) Permeable Ballast</p> <p>9-03.9(3) Crushed Surfacing</p> <p>9-03.12(1)A Gravel Backfill for Foundations Class A</p>	

2
3
4
5
6

For Reclamation Facilities that do not participate in Tier 2 and Tier 3, approval of recycled concrete aggregate will be in accordance with Section 9-03.21(1), and acceptance will be in accordance with Section 3-04.

1 **9-03.21(1)E Table on Maximum Allowable percent (By Weight) of Recycled**
2 **Material**

3 "Portland Cement" is deleted from the first two rows in the table.

4
5 The following new row is inserted after the second row:

Coarse Aggregate for Concrete Pavement	9-03.1(4)	0	100	0	0
--	-----------	---	-----	---	---

7
8 The first column of the fourth row (after the preceding Amendment is applied) is revised to
9 read:

10
11 Coarse Aggregate for Commercial Concrete and Class 3000 Concrete

12
13 **Section 9-04, Joint and Crack Sealing Materials**
14 **January 7, 2019**

15 This section's title is revised to read:

16
17 **Joint Sealing Materials**

18
19 **9-04.1(2) Premolded Joint Filler for Expansion Joints**

20 In this section, each reference to "AASHTO T 42" is revised to read "ASTM D 545".

21
22 **9-04.2(1)A1 Hot Poured Sealant for Cement Concrete Pavement**

23 This section is supplemented with the following:

24
25 Hot poured sealant for cement concrete pavement is acceptable for installations in joints
26 where cement concrete pavement abuts a bituminous pavement.

27
28 **9-04.2(1)A2 Hot Poured Sealant for Bituminous Pavement**

29 This section is supplemented with the following:

30
31 Hot poured sealant for bituminous pavement is acceptable for installations in joints where
32 cement concrete pavement abuts a bituminous pavement.

33
34 **9-04.2(1)B Sand Slurry for Bituminous Pavement**

35 Item number 2 of the first paragraph is revised to read:

- 36
37 2. Two percent portland cement or blended hydraulic cement, and

38
39 **9-04.3 Joint Mortar**

40 The first paragraph is revised to read:

41
42 Mortar for hand mortared joints shall conform to Section 9-20.4(3) and consist of one part
43 portland cement or blended hydraulic cement, three parts fine sand, and sufficient water
44 to allow proper workability.

45
46 **9-04.5 Flexible Plastic Gaskets**

47 In the table, the Test Method value for **Specific Gravity at 77°F** is revised to read "ASTM
48 D71".

1
2 In the table, the Test Method value for **Flash Point COC, F** is revised to read “ASTM D93 REV
3 A”.

4
5 In the table, the Test Method value for **Volatile Matter** is revised to read “ASTM D6”.

6
7 **Section 9-05, Drainage Structures and Culverts**
8 **January 7, 2019**

9 **9-05.3(1)A End Design and Joints**

10 The second sentence of the first paragraph is revised to read:

11
12 The joints and gasket material shall meet the requirements of ASTM C990.

13
14 **9-05.3(1)C Age at Shipment**

15 The last sentence of the first paragraph is revised to read:

16
17 Unless it is tested and accepted at an earlier age, it shall not be considered ready for
18 shipment sooner than 28 days after manufacture when made with Type II portland cement
19 or blended hydraulic cement, nor sooner than 7 days when made with Type III portland
20 cement.

21
22 **9-05.7(3) Concrete Storm Sewer Pipe Joints**

23 The second sentence is revised to read:

24
25 The joints and gasket material shall meet the requirements of ASTM C990.

26
27 **9-05.7(4)A Hydrostatic Pressure on Pipes in Straight Alignment**

28 The first sentence is revised to read:

29
30 Hydrostatic pressure tests on pipes in straight alignment shall be made in accordance
31 with the procedure outlined in Section 10 of ASTM C990, except that they shall be
32 performed on an assembly consisting of not less than three nor more than five pipe
33 sections selected from stock by the Engineer and assembled in accordance with standard
34 installation instructions issued by the manufacturer.

35
36 **9-05.24(1) Polypropylene Culvert Pipe and Storm Sewer Pipe**

37 This section is revised to read:

38
39 Polypropylene culvert and storm sewer pipe shall conform to the following requirements:

- 40
41 1. For dual wall pipe sizes up to 60 inches: ASTM F2881 or AASHTO M 330, Type
42 S or Type D.
43
44 2. For double or triple wall pipe sizes up to 60 inches: ASTM F2764.
45
46 3. Fittings shall be factory welded, injection molded, or PVC.

47
48 **9-05.24(2) Polypropylene Sanitary Sewer Pipe**

49 This section is revised to read:

50

1 Polypropylene sanitary sewer pipe shall conform to the following requirements:

2

3 1. For pipe sizes up to 60 inches: ASTM F2764.

4

5 2. Fittings shall be factory welded, injection molded, or PVC.

6

7 **Section 9-06, Structural Steel and Related Materials**

8

January 7, 2019

9

9-06.5 Bolts

10 This section's title is revised to read:

11

12 **Bolts and Rods**

13

14 **9-06.5(4) Anchor Bolts**

15 This section, including title, is revised to read:

16

17 **9-06.5(4) Anchor Bolts and Anchor Rods**

18 Anchor bolts and anchor rods shall meet the requirements of ASTM F1554 and, unless
19 otherwise specified, shall be Grade 105 and shall conform to Supplemental Requirements
20 S2, S3, and S4.

21

22 Nuts for ASTM F1554 Grade 105 black anchor bolts and anchor rods shall conform to
23 ASTM A563, Grade D or DH. Nuts for ASTM F1554 Grade 105 galvanized anchor bolts
24 and anchor rods shall conform to either ASTM A563, Grade DH, or AASHTO M292, Grade
25 2H, and shall conform to the overlapping, lubrication, and rotational testing requirements
26 in Section 9-06.5(3). Nuts for ASTM F1554 Grade 36 or 55 black or galvanized anchor
27 bolts and anchor rods shall conform to ASTM A563, Grade A or DH. Washers shall
28 conform to ASTM F436.

29

30 The bolts and rods shall be tested by the manufacturer in accordance with the
31 requirements of the pertinent Specification and as specified in these Specifications.
32 Anchor bolts, anchor rods, nuts, and washers shall be inspected prior to shipping to the
33 project site. The Contractor shall submit to the Engineer for acceptance a Manufacturer's
34 Certificate of Compliance for the anchor bolts, anchor rods, nuts, and washers, as defined
35 in Section 1-06.3. If the Engineer deems it appropriate, the Contractor shall provide a
36 sample of the anchor bolt, anchor rod, nut, and washer for testing.

37

38 All bolts, rods, nuts, and washers shall be marked and identified as required in the
39 pertinent Specification.

40

41 **9-06.15 Welded Shear Connectors**

42 The third paragraph is revised to read:

43

44 Mechanical properties shall be determined in accordance with AASHTO T 244.

45

46 **9-06.17 Vacant**

47 This section, including title, is revised to read:

48

1 **9-06.17 Noise Barrier Wall Access Door**

2 Access door frames shall be formed of 14-gauge steel to the size and dimensions shown
3 in the Plans. The access door frame head and jamb members shall be mitered, securely
4 welded, and ground smooth. Each head shall have two anchors and each jamb shall have
5 three anchors. The hinges shall be reinforced with ¼-inch by 12-inch plate, width equal
6 to the full inside width of the frame.

7
8 Access doors shall be full flush 1-¾-inch thick seamless doors with a polystyrene core.
9 Door faces shall be constructed with smooth seamless 14-gauge roller-levered, cold-
10 rolled steel sheet conforming to ASTM A 792 Type SS, Grade 33 minimum, Coating
11 Designation AZ55 minimum. The vertical edges shall be neat interlocked hemmed edge
12 seam. The top and bottom of the door shall be enclosed with 14-gauge channels. Mortise
13 and reinforcement for locks and hinges shall be 10-gauge steel. Welded top cap shall be
14 ground and filled for exterior applications. The bottom channel shall have weep holes.

15
16 Each access door shall have three hinges. Access door hinges shall be ASTM A 276 Type
17 316 stainless steel, 4-½-inches square, with stainless steel ball bearing and non-
18 removable pins.

19
20 Each access door shall have two pull plates. The pull plates shall be ASTM A 240 Type
21 316 stainless steel, with a grip handle of one-inch diameter and 8 to 10-inches in length.

22
23 The door assembly shall be fabricated and assembled as a complete unit including all
24 hardware specified prior to shipment.

25
26 **9-06.18 Metal Bridge Railing**

27 The second sentence of the first paragraph is revised to read:

28
29 Steel used for metal railings, when galvanized after fabrication in accordance with
30 AASHTO M111, shall have a controlled silicon content of either 0.00 to 0.06 percent or
31 0.15 to 0.25 percent.

32
33 **Section 9-07, Reinforcing Steel**
34 **January 7, 2019**

35 **9-07.5(1) Epoxy-Coated Dowel Bars (for Cement Concrete Rehabilitation)**

36 This section (including title) is revised to read:

37
38 **9-07.5(1) Dowel Bars for Cement Concrete Pavement Rehabilitation**

39 Dowel bars for Cement Concrete Pavement Rehabilitation shall be 1½ inch outside
40 diameter plain round steel bars or tubular bars 18 inches in length and meet the
41 requirements of one of the following dowel bar types:

- 42
43 1. Epoxy-coated dowel bars shall be round plain steel bars of the dimensions
44 shown in the Standard Plans. They shall conform to AASHTO M31, Grade 60 or
45 ASTM A615, Grade 60 and shall be coated in accordance with ASTM A1078
46 Type 2 coating, except that the bars may be cut to length after being coated. Cut
47 ends shall be coated in accordance with ASTM A1078 with a patching material
48 that is compatible with the coating, inert in concrete and recommended by the
49 coating manufacturer. The thickness of the epoxy coating shall be 10 mils plus
50 or minus 2 mils. The Contractor shall furnish a written certification that properly
51 identifies the coating material, the number of each batch of coating material

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used, quantity represented, date of manufacture, name and address of manufacturer, and a statement that the supplied coating material meets the requirements of ASTM A1078 Type 2 coating. Patching material, compatible with the coating material and inert in concrete and recommended by the manufacturer shall be supplied with each shipment for field repairs by the Contractor.

- 2. ASTM A513 steel tubes made from Grade 60 Carbon Steel Tube with a 1.625 inch outside diameter and a 0.120 inch wall thickness. Both the inside and outside of the tube shall be zinc coated with G40 galvanizing in accordance with ASTM A653. Following zinc coating the tubes shall be coated in accordance with Section 9-07.5(1) item 1. The ends of the tube shall be capped to prevent intrusion of concrete or other materials.

9-07.5(2) Corrosion Resistant Dowel Bars (for Cement Concrete Pavement and Cement Concrete Pavement Rehabilitation)

The first paragraph (up until the colon) is revised to read:

Corrosion resistant dowel bars shall be 1½ inch outside diameter plain round steel bars or tubular bars 18 inches in length and meet the requirements of one of the following:

Item number 4 and 5 of the first paragraph are revised to read:

- 4. Corrosion-resistant, low-carbon, chromium plain steel bars for concrete reinforcement meeting all the requirements of ASTM A 1035 Alloy Type CS Grade 100 or Alloy Type CS Grade 120.
- 5. Zinc Clad dowel bars shall be 1½ inch solid bars or 1.625 inch outside diameter by 0.120 inch wall tubular bars meeting the chemical and physical properties of AASHTO M 31, Grade 60, or AASHTO M 255, Grade 60. The bars shall have a minimum of 0.035 inches A710 Zinc alloy clad to the plain steel inner bar or tube. A710 Zinc shall be composed of: zinc: 99.5 percent, by weight, minimum; copper: 0.1-0.25 percent, by weight; and iron: 0.0020 percent, by weight, maximum. Each end of tubular bars shall be plugged using a snug-fitting insert to prohibit any intrusion of concrete or other materials.

The numbered list in the first paragraph is supplemented with the following:

- 6. Multicoated fusion bonded epoxy bars shall consist of an ASTM A615 bar with alternating layers of ASTM A934 coating and an abrasion resistant overcoat (ARO). The ASTM A934 coating shall form the base and there shall be two layers of each coating material. The minimum thickness of the combined layers of the ASTM A934 coating and ARO coating shall be 20 mils. The ARO shall meet the following requirements:

Test	Method	Specification
Gouge Resistance	NACE TM0215, 30 kg wt., LS-1 bit @ 25°C	< 0.22 mm
Gouge Resistance	NACE TM0215, 50 kg wt., LS-1 bit @ 25°C	< 0.44 mm

1 7. ASTM A513 steel tubes made from Grade 60 Carbon Steel Tube with a 1.625 inch
2 outside diameter and a 0.120 inch wall thickness. Both the inside and outside of the
3 tube shall be zinc coated with G90 galvanizing in accordance with ASTM A653.
4 Following zinc coating the tubes shall be coated in accordance with Section 9-07.5(1)
5 item 1. The ends of the tube shall be capped to prevent intrusion of concrete or other
6 materials.
7

8 The last paragraph is revised to read:
9

10 Stainless Steel Clad and Stainless Steel Tube Dowel bar ends shall be sealed with a
11 patching material (primer and finish coat) used for patching epoxy-coated reinforcing steel
12 as required in Section 9-07.3, item 6.
13

14 **9-07.7 Wire Mesh**

15 This section is supplemented with the following:
16

17 Welded wire manufacturers shall participate in the NTPEP Audit Program for Reinforcing
18 Steel (rebar) Manufacturers and shall be listed on the NTPEP audit program website
19 displaying that they are NTPEP compliant.
20

21 **Section 9-08, Paints and Related Materials**

22 **January 7, 2019**

23 **9-08.1(1) Description**

24 The first sentence is revised to read:
25

26 Paint used for highway and bridge structure applications shall be made from materials
27 meeting the requirements of the applicable Federal and State Paint Specifications,
28 Department of Defense (DOD), American Society of Testing of Materials (ASTM), and The
29 Society for Protective Coatings (SSPC) specifications in effect at time of manufacture.
30

31 **9-08.1(2) Paint Types**

32 This section is supplemented with the following new subsections:
33

34 **9-08.1(2)M NEPCOAT Qualified Products List A**

35 Qualified products used shall be part of a NEPCOAT system supplied by the same
36 manufacturer.
37

38 **9-08.1(2)N NEPCOAT Qualified Products List B**

39 Qualified products used shall be part of a NEPCOAT system supplied by the same
40 manufacturer.
41

42 **9-08.1(2)D Organic Zinc-Rich Primer**

43 This section, including title, is revised to read:
44

45 **Vacant**
46

47 **9-08.1(2)E Epoxy Polyamide**

48 This section is revised to read:
49

1 Epoxy polyamide shall be a two-component system conforming to MIL-DTL-24441 or
2 SSPC Coating Standard No. 42.

3
4 **9-08.1(2)H Top Coat, Single-Component, Moisture-Cured Polyurethane**

5 This section is revised to read:

6
7 Vehicle Type: Moisture-cured aliphatic polyurethane.

8
9 Color and Gloss: Meet the SAE AMS Standard 595 Color as specified in the table
10 below.

11
12 The Top Coat shall meet the following requirements:

13 The resin shall be an aliphatic urethane.

14
15 Minimum-volume solids 50 percent.

16
17 The top coat shall be semi-gloss.

18
19

Color	Semi-Gloss
Washington Gray	26357
Mt. Baker Gray	26134
Mt. St. Helens Gray	26306
Cascade Green	24158

20

21 **9-08.1(2)I Rust-Penetrating Sealer**

22 This section is revised to read:

23

24 Rust-penetrating sealer shall be a two-component, chemically-cured, 100 percent solids
25 epoxy.

26

27 **9-08.1(2)J Black Enamel**

28 This section is revised to read:

29

30 The enamel shall conform to Federal Specification MIL PRF 24635E Type II Class 2.

31

32 **9-08.1(2)K Orange Equipment Enamel**

33 The first paragraph is revised to read:

34

35 The enamel shall be an alkyd gloss enamel conforming to Federal Specification MIL-PRF-
36 24635E Type II Class 1. The color, when dry, shall match that of SAE AMS Standard 595,
37 color number 12246.

38

39 **9-08.1(2)L Exterior Acrylic Latex Paint-White**

40 The first paragraph is revised to read:

41

42 This paint shall conform to Federal Specification MIL-PRF-24635E Type II Class 1, 2 or
43 3.

44

45 **9-08.1(7) Acceptance**

46 This section is revised to read:

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For projects with moisture-cured polyurethane quantities less than 20 gallons, acceptance will be by the Manufacturer’s Certificate of Compliance.

For projects with moisture-cured polyurethane quantities greater than 20 gallons, the product shall be listed in the current WSDOT Qualified Products List (QPL). If the lot number is listed on the QPL, it may be accepted without additional testing. If the lot number is not listed on the QPL, a 1 quart sample shall be submitted to the State Materials Laboratory for testing and acceptance.

For all other paint types, acceptance will be based on visual inspection.

9-08.1(8) Standard Colors

In the first paragraph, the reference to “Federal Standard 595” is revised to read “SAE AMS Standard 595”.

The second paragraph is revised to read:

Unless otherwise specified, all top or finish coats shall be semi-gloss, with the paint falling within the range of 35 to 70 on the 60-degree gloss meter.

9-08.2 Powder Coating Materials for Coating Galvanized Surfaces

The last paragraph is revised to read:

Repair materials shall be as recommended by the powder coating manufacturer and as specified in the Contractor’s powder coating plan as accepted by the Engineer.

9-08.3 Pigmented Sealer Materials for Coating of Concrete Surfaces

This section, including title, is revised to read:

9-08.3 Concrete Surface Treatments

9-08.3(1) Pigmented Sealer Materials

The pigmented sealer shall be a semi-opaque, colored toner containing only methyl methacrylate-ethyl acrylate copolymer resins, toning pigments suspended in solution at all times by a chemical suspension agent, and solvent. Toning pigments shall be laminar silicates, titanium dioxide, and inorganic oxides only. There shall be no settling or color variation. Tinting shall occur at the factory at the time of manufacture and placement in containers, prior to initial shipment. Use of vegetable or marine oils, paraffin materials, stearates, or organic pigments in any part of coating formulation will not be permitted. The color of pigmented sealer shall be as specified by the Contracting Agency. The Contractor shall submit a 1-quart wet sample, a drawdown color sample, and spectrophotometer or colorimeter readings taken in accordance with ASTM D2244, for each batch and corresponding standard color card. The calculated Delta E shall not exceed 1.5 from the Commission Internationale de l’Eclairage (CIELAB) when measured at 10 degrees Standard Observer and Illuminant D 65.

The 1-quart wet sample shall be submitted in the manufacturer’s labeled container with product number, batch number, and size of batch. The companion drawdown color sample shall be labeled with the product number, batch number, and size of batch. The Contractor shall submit the specified samples and readings to the Engineer at least 14 calendar days prior to the scheduled application of the sealer.

1 The Contractor shall not begin applying pigmented sealer until receiving the
2 Engineer's written approval of the pigmented sealer color samples.
3

4 **9-08.3(2) Exposed Aggregate Concrete Coatings and Sealers**
5 **9-08.3(2)A Retardant Coating**

6 Retardant coating shall exhibit the following properties:
7

- 8 1. Retards the set of the surface mortar of the concrete without preventing
9 the concrete to reach the specified 28 day compressive strength.
- 10 2. Leaves the aggregate with its original color and luster, and firmly
11 embedded in the concrete matrix.
- 12 3. Allows the removal of the surface mortar in accordance with the
13 methods specified in Section 6-02.3(14)E without the use of acidic
14 washing compounds.
- 15 4. Allows for uniform removal of the surface mortar.
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20 If the Contractor proposes use of a retardant coating that is not listed in the
21 current WSDOT QPL, the Contractor shall submit a Type 2 Working Drawing
22 consisting of a one quart product sample from a current lot along with supporting
23 product information, Safety Data Sheet, and a Manufacturer's Certificate of
24 Compliance stating that the product conforms to the above performance
25 requirements.
26

27 **9-08.3(2)B Clear Sealer**

28 The sealer for concrete surfaces with exposed aggregate finish shall be a clear,
29 non-gloss, penetrating sealer of either a silane, siloxane, or silicone based
30 formulation.
31

32 **9-08.3(3) Permeon Treatment**

33 Permeon treatment shall be a product of known consistent performance in producing
34 the SAE AMS Standard 595 Color No. 30219 target color hue established by
35 WSDOT, either selected from the WSDOT Qualified Products List (QPL), or an
36 equivalent product accepted by the Engineer. For acceptance of products not listed
37 in the current WSDOT QPL, the Contractor shall submit Type 3 Working Drawings
38 consisting of a one quart product sample from a current lot, supporting product
39 information and a Safety Data Sheet.
40

41 **Section 9-13, Riprap, Quarry Spalls, Slope Protection, and Rock for Erosion**
42 **and Scour Protection and Rock Walls**
43 **April 2, 2018**

44 **9-13.1(1) General**

45 The last paragraph is revised to read:
46

47 Riprap and quarry spalls shall be free from segregation, seams, cracks, and other defects
48 tending to destroy its resistance to weather and shall meet the following test requirements:
49

50 **9-13.5 Concrete Slope Protection**

51 This section is revised to read:

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Concrete slope protection shall consist of reinforced portland cement or blended hydraulic cement concrete poured or pneumatically placed upon the slope with a rustication joint pattern or semi-open concrete masonry units placed upon the slope closely adjoining each other.

9-13.5(2) Poured Portland Cement Concrete Slope Protection

This section's title is revised to read:

Poured Portland Cement or Blended Hydraulic Cement Concrete Slope Protection

9-13.5(3) Pneumatically Placed Portland Cement Concrete Slope Protection

This section's title is revised to read:

Pneumatically Placed Portland Cement or Blended Hydraulic Cement Concrete Slope Protection

The first paragraph is revised to read:

Cement – This material shall be portland cement or blended hydraulic cement as specified in Section 9-01.

9-13.7(1) Rock for Rock Walls and Chinking Material

The first paragraph (up until the colon) is revised to read:

Rock for rock walls and chinking material shall be hard, sound and durable material, free from seams, cracks, and other defects tending to destroy its resistance to weather, and shall meet the following test requirements:

**Section 9-14, Erosion Control and Roadside Planting
August 6, 2018**

9-14.4(2) Hydraulically Applied Erosion Control Products (HECPs)

In Table 1, the last four rows are deleted.

9-14.4(2)A Long-Term Mulch

The first paragraph is supplemented with the following:

Products containing cellulose fiber produced from paper or paper components will not be accepted.

Table 2 is supplemented with the following new rows:

Water Holding Capacity	ASTM D 7367	800 percent minimum
Organic Matter Content	AASHTO T 267	90 percent minimum
Seed Germination Enhancement	ASTM D 7322	Long Term 420 percent minimum

1 **9-14.4(2)B Moderate-Term Mulch**

2 This section is revised to read:

3

4 Within 48 hours of application, the Moderate-Term Mulch shall bond with the soil surface
5 to create a continuous, absorbent, flexible, erosion-resistant blanket. Moderate-Term
6 Mulch shall effectively perform the intended erosion control function in accordance with
7 Section 8-01.3(1) for a minimum of 3 months, or until temporary vegetation has been
8 established, whichever comes first.

9

10 Moderate-Term Mulch shall not be used in conjunction with permanent seeding.

11

12 **9-14.4(2)C Short-Term Mulch**

13 This section is revised to read:

14

15 Short-Term Mulch shall effectively perform the intended erosion control function in
16 accordance with Section 8-01.3(1) for a minimum of 2 months, or until temporary
17 vegetation has been established, whichever comes first. Short-Term Mulch shall not be
18 used in conjunction with permanent seeding.

19

20 **Section 9-16, Fence and Guardrail**

21 **August 6, 2018**

22 **9-16.3(1) Rail Element**

23 The last sentence of the first paragraph is revised to read:

24

25 All rail elements shall be formed from 12-gage steel except for thrie beam reducer
26 sections, reduced length thrie beam rail elements, thrie beams used for bridge rail
27 retrofits, and Design F end sections, which shall be formed from 10-gage steel.

28

29 **9-16.3(5) Anchors**

30 The last paragraph is revised to read:

31

32 Cement grout shall conform to Section 9-20.3(4) and consist of one part portland cement
33 or blended hydraulic cement and two parts sand.

34

35 **Section 9-18, Precast Traffic Curb**

36 **April 2, 2018**

37 **9-18.1(1) Aggregates and Proportioning**

38 Item number 1 of the first paragraph is revised to read:

39

- 40 1. Portland cement or blended hydraulic cement shall conform to the requirements of
41 Section 9-01 except that it may be Type I portland cement conforming to AASHTO M
42 85.

43

44 **Section 9-20, Concrete Patching Material, Grout, and Mortar**

45 **April 1, 2019**

46 **9-20.1 Patching Material**

47 This section, including title, is revised to read:

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9-20.1 Patching Material for Cement Concrete Pavement

Concrete patching material shall be prepackaged mortar extended with aggregate. The amount of aggregate for extension shall conform to the manufacturer's recommendation.

Patching mortar and patching mortar extended with aggregate shall contain cementitious material and conform to Sections 9-20.1(1) and 9-20.1(2). The Manufacturer shall use the services of a laboratory that has an equipment calibration verification system and a technician training and evaluation process in accordance with AASHTO R 18 to perform all tests specified in Section 9-20.1.

9-20.1(1) Patching Mortar

Patching mortar shall conform to the following requirements:

Compressive Strength	ASTM Test Method	Specification
at 3 hours	C 39	Minimum 3,000 psi
at 24 hours	C 39	Minimum 5,000 psi
Length Change		
at 28 days	C 157	0.15 percent maximum
Total Chloride Ion Content	C 1218	1 lb/yd ³ maximum
Bond Strength		
at 24 hours	C 882 (As modified by C 928, Section 9.5)	Minimum 1,000 psi
Scaling Resistance (at 25 cycles of freezing and thawing)	C 672 (As modified by C 928, Section 9.4)	1 lb/ft ² maximum

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9-20.1(2) Patching Mortar Extended with Aggregate

Patching mortar extended with aggregate shall meet the following requirements:

Compressive Strength	ASTM Test Method	Specification
at 3 hours	C 39	Minimum 3,000 psi
at 24 hours	C 39	Minimum 5,000 psi
Length Change		
at 28 days	C 157	0.15 percent maximum
Bond Strength		
at 24 hours	C 882 (As modified by ASTM C928, Section 9.5)	Minimum 1,000 psi
Scaling Resistance (at 25 cycles of freezing and thawing)	C 672	2 Maximum Visual Rating
Freeze thaw	C 666	Maximum expansion 0.10% Minimum durability 90.0%

18

1 **9-20.1(3) Aggregate**
2 Aggregate used to extend the patching mortar shall conform to Section 9-03.1(4) and
3 be AASHTO Grading No. 8. A Manufacturer's Certificate of Compliance shall be
4 submitted showing the aggregate source and the gradation. Mitigation for Alkali Silica
5 Reaction (ASR) will not be required for the extender aggregate used for concrete
6 patching material.
7

8 **9-20.1(4) Water**
9 Water shall meet the requirements of Section 9-25.1. The quantity of water shall be
10 within the limits recommended by the repair material manufacturer.
11

12 **9-20.2 Specifications**

13 This section, including title, is revised to read:
14

15 **9-20.2 Patching Material for Concrete Structure Repair**

16 Concrete patching material shall be a prepackaged mixture of portland or blended
17 hydraulic cement, aggregate, and admixtures. Fly ash, ground granulated blast furnace
18 slag and microsilica fume may be used. The concrete patching material may be shrinkage
19 compensated. The concrete patching material shall also meet the following requirements:
20

- 21 • Compressive strength of 6000 psi or higher at 28 days in accordance with
22 AASHTO T 22 (ASTM C 39), unless noted otherwise
- 23
- 24 • Bond strength of 250 psi or higher at 28 days or less in accordance with ASTM
25 C 1583 or ICRI 210.3R
- 26
- 27 • Shrinkage shall be 0.05 percent (500 microstrain) or lower at 28 days in
28 accordance with AASHTO T 160 (ASTM C 157) as modified by ICRI 320.3R
- 29
- 30 • Permeability shall be 2,000 coulombs or lower at 28 days in accordance with
31 AASHTO T 277 (ASTM C 1202)
- 32
- 33 • Freeze-thaw resistance shall have a durability factor of 90 percent or higher after
34 a minimum of 300 cycles in accordance with AASHTO T 161 Procedure A (ASTM
35 C 666)
- 36
- 37 • Soluble chloride ion limits in Section 6-02.3(2) shall be satisfied

38

39 **9-20.2(1) Patching Mortar**

40 This section, including title, is deleted in its entirety.
41

42 **9-20.2(2) Patching Mortar Extended with Aggregate**

43 This section, including title, is deleted in its entirety.
44

45 **9-20.3(3) Grout Type 3 for Unconfined Bearing Pad Applications**

46 This section's title is revised to read:
47

48 **Grout Type 3 for Unconfined Applications**

49 This section is revised to read:
50
51

1 Grout Type 3 shall be a prepackaged material that does not include expansive admixtures
2 meeting the following requirements:

- 3
- 4 • Compressive strength shall be 4000 psi or higher at 28 days in accordance with
- 5 AASHTO T 22 (ASTM C 39) for grout extended with coarse aggregate or
- 6 AASHTO T 106 (ASTM C109) otherwise.
- 7
- 8 • Bond strength shall meet one of the following:
- 9
 - 10 ◦ 250 psi or higher at 28 days or less in accordance with ASTM C1583.
 - 11
 - 12 ◦ 2000 psi or higher at 28 days or less in accordance with ASTM C882. The
 - 13 following modification to ASTM C882 is acceptable: use Type 3 Grout in lieu
 - 14 of epoxy resin base bonding system and freshly mixed portland-cement
 - 15 mortar in the procedure for testing Type II and V systems.
 - 16
- 17 • Drying shrinkage shall be 0.08 percent (800 microstrain) or lower at 28 days in
- 18 accordance with AASHTO T 160 (ASTM C157). The following modification to
- 19 AASHTO T 160 is acceptable: use a standard specimen size of 3 x 3 x 11-¼
- 20 inches.
- 21

22 **9-20.5 Bridge Deck Repair Material**

23 Item number 3 of the first paragraph is revised to read:

- 24
- 25 3. Permeability of less than 2,000 coulombs at 28-days or more in accordance with
- 26 AASHTO T 277.
- 27

28 **Section 9-21, Raised Pavement Markers (RPM)** 29 **January 2, 2018**

30 **9-21.2 Raised Pavement Markers Type 2**

31 This section's content is deleted.

32

33 **9-21.2(1) Physical Properties**

34 This section, including title, is revised to read:

35

36 **9-21.2(1) Standard Raised Pavement Markers Type 2**

37 The marker housing shall contain reflective faces as shown in the Plans to reflect incident
38 light from either a single or opposite directions and meet the requirements of ASTM D
39 4280 including Flexural strength requirements.

40

41 **9-21.2(2) Optical Requirements**

42 This section, including title, is revised to read:

43

44 **9-21.2(2) Abrasion Resistant Raised Markers Type 2**

45 Abrasion Resistant Raised Markers Type 2 shall comply with Section 9-21.2(1) and meet
46 the requirements of ASTM D 4280 with the following additional requirement: The
47 coefficient of luminous intensity of the markers shall be measured after subjecting the
48 entire lens surface to the test described in ASTM D 4280 Section 9.5 using a sand drop
49 apparatus. After the exposure described above, retroreflected values shall not be less
50 than 0.5 times a nominal unblemished sample.

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9-21.2(3) Strength Requirements

This section is deleted in its entirety.

Section 9-26, Epoxy Resins January 7, 2019

9-26.1(1) General

The following new sentence is inserted after the first sentence of the first paragraph:

For pre-packaged cartridge kits, the epoxy bonding agent shall meet the requirements of ASTM C881 when mixed according to manufacturer instructions, utilizing the manufacturer's mixing nozzle.

9-26.1(2) Packaging and Marking

The first sentence of the first paragraph is revised to read:

The components of the epoxy system furnished under these Specifications shall be supplied in separate containers or pre-packaged cartridge kits that are non-reactive with the materials contained.

The second paragraph is revised to read:

Separate containers shall be marked by permanent marking that identify the formulator, "Component A" (contains the Epoxy Resin) and "Component B" (Contains the Curing Agent), type, grade, class, lot or batch number, mixing instructions and the quantity contained in pounds or gallons as defined by these Specifications.

The following new paragraph is inserted after the second paragraph:

Pre-packaged cartridge kits shall be marked by permanent marking that identify the formulator, type, grade, class, lot or batch number, mixing instructions and the quantity contained in ounces or milliliters as defined by these Specifications.

Section 9-28, Signing Materials and Fabrication April 1, 2019

9-28.2 Manufacturer's Identification and Date

The second sentence is revised to read:

In addition, the width and height dimension, in inches, the Contract number, and the number of the sign as it appears in the Plans shall be placed using 3-inch series C black letters on the back of destination, distance, and large special signs.

9-28.10 Vacant

This section, including title, is revised to read:

9-28.10 Digital Printing

Transparent and opaque durable inks used in digital printed sign messages shall be as recommended by the manufacturer. When properly applied, digital printed colors shall have a warranty life of the base retroreflective sign sheeting. Digital applied colors shall

1 present a smooth surface, free from foreign material, and all messages and borders shall
2 be clear and sharp. Digital printed signs shall conform to 70% of the retroreflective
3 minimum values established for its type and color. Digitally printed signs shall meet the
4 daytime color and luminance, and nighttime color requirements of ASTM D 4956. No
5 variations in color or overlapping of colors will be permitted. Digital printed permanent
6 traffic signs shall have an integrated engineered match component clear protective
7 overlay recommended by the sheeting manufacturer applied to the entire face of the sign.
8 On Temporary construction/maintenance signs printed with black ink only, the protective
9 overlay film is optional, as long as the finished sign has a warranty of a minimum of three
10 years from sign sheeting manufacturer.

11
12 All digital printed traffic control signs shall be an integrated engineered match component
13 system. The integrated engineered match component system shall consist of
14 retroreflective sheeting, durable ink(s), and clear overlay film all from the same
15 manufacturer applied to aluminum substrate conforming to Section 9-28.8.

16
17 The sign fabricator shall use an approved integrated engineered match component
18 system as listed on the Qualified Products List (QPL). Each approved digital printer shall
19 only use the compatible retroreflective sign sheeting manufacturer's engineered match
20 component system products.

21
22 Each retroreflective sign sheeting manufacturer/integrated engineered match component
23 system listed on the QPL shall certify a department approved sign fabricator is approved
24 to operate their compatible digital printer. The sign fabricator shall re-certify annually with
25 the retroreflective sign manufacturer to ensure their digital printer is still meeting
26 manufacturer's specifications for traffic control signs. Documentation of each re-
27 certification shall be submitted to the QPL Engineer annually.

28
29 **9-28.11 Hardware**

30 The last paragraph is revised to read:
31
32 All steel parts shall be galvanized in accordance with AASHTO M111. Steel bolts and
33 related connecting hardware shall be galvanized in accordance with ASTM F 2329.

34
35 **9-28.14(2) Steel Structures and Posts**

36 The first sentence of the third paragraph is revised to read:
37
38 Anchor rods for sign bridge and cantilever sign structure foundations shall conform to
39 Section 9-06.5(4), including Supplemental Requirement S4 tested at -20°F.

40
41 In the second sentence of the fourth paragraph, "AASHTO M232" is revised to read "ASTM F
42 2329".

43
44 The first sentence of the fifth paragraph is revised to read:

45
46 Except as otherwise noted, steel used for sign structures and posts shall have a controlled
47 silicon content of either 0.00 to 0.06 percent or 0.15 to 0.25 percent.

48
49 The last sentence of the last paragraph is revised to read:

50
51 If such modifications are contemplated, the Contractor shall submit a Type 2 Working
52 Drawing of the proposed modifications.

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**Section 9-29, Illumination, Signal, Electrical
April 1, 2019**

9-29.1 Conduit, Innerduct, and Outerduct

This section is supplemented with the following new subsections:

9-29.1(10) Pull Tape

Pull tape shall be pre-lubricated polyester pulling tape. The pull tape shall have a minimum width of 1/2-inch and a minimum tensile strength of 500 pounds. Pull tape may have measurement marks.

9-29.1(11) Foam Conduit Sealant

Foam conduit sealant shall be self-expanding waterproof foam designed to prevent both water and pest intrusion. The foam shall be designed for use in and around electrical equipment, including both insulated and bare conductors.

9-29.2(1) Junction Boxes

The first paragraph is revised to read:

For the purposes of this Specification concrete is defined as portland cement or blended hydraulic cement concrete and non-concrete is all others.

9-29.2(1)A2 Non-Concrete Junction Boxes

The first paragraph is revised to read:

Material for the non-concrete junction boxes shall be of a quality that will provide for a similar life expectancy as portland cement or blended hydraulic cement concrete in a direct burial application.

9-29.2(2)A Standard Duty Cable Vaults and Pull Boxes

In the table in the last paragraph, the fourth, fifth and sixth rows are revised to read:

Slip Resistant Lid	ASTM A36 steel
Frame	ASTM A36 steel
Slip Resistant Frame	ASTM A36 steel

9-29.3(2)A1 Single Conductor Current Carrying

This second sentence is revised to read:

Insulation shall be XLP (cross-linked polyethylene) or EPR (Ethylene Propylene Rubber), Type USE (Underground Service Entrance) or USE-2, and rated for 600-volts or higher.

9-29.6 Light and Signal Standards

In the first sentence of the third paragraph, "AASHTO M232" is revised to read "ASTM F 2329".

Item number 2 of the last paragraph is revised to read:

- 2. The steel light and signal standard fabricator's shop drawing submittal, including supporting design calculations, submitted as a Type 2E Working Drawing in accordance with Section 8-20.2(1) and the Special Provisions.

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9-29.6(1) Steel Light and Signal Standards

In the second paragraph, "AASHTO M232" is revised to read "ASTM F 2329".

The first sentence of the last paragraph is revised to read:

Steel used for light and signal standards shall have a controlled silicon content of either 0.00 to 0.06 percent or 0.15 to 0.25 percent.

9-29.6(5) Foundation Hardware

In the last paragraph, "AASHTO M232" is revised to read "ASTM F 2329".

9-29.10(1) Conventional Roadway Luminaires

This section is revised to read:

All conventional roadway luminaires shall meet 3G vibration requirements as described in ANSI C136.31.

All luminaires shall have housings fabricated from aluminum. The housing shall be painted flat gray, SAE AMS Standard 595 color chip No. 26280, unless otherwise specified in the Contract. Painted housings shall withstand a 1,000 hour salt spray test as specified in ASTM B117.

Each housing shall include a four bolt slip-fitter mount capable of accepting a nominal 2" tenon and adjustable within +/- 5 degrees of the axis of the tenon. The clamping bracket(s) and the cap screws shall not bottom out on the housing bosses when adjusted within the +/- 5 degree range. No part of the slipfitter mounting brackets on the luminaires shall develop a permanent set in excess of 0.2 inch when the cap screws used for mounting are tightened to a torque of 32 foot-pounds. Each luminaire shall include leveling reference points for both transverse and longitudinal adjustment.

All luminaires shall include shorting caps when shipped. The caps shall be removed and provided to the Contracting Agency when an alternate control device is required to be installed in the photocell socket. House side shields shall be included when required by the Contract. Order codes shall be modified to the minimum extent necessary to include the option for house side shields.

This section is supplemented with the following new subsections:

9-29.10(1)A High Pressure Sodium (HPS) Conventional Roadway Luminaires

HPS conventional roadway luminaires shall meet the following requirements:

1. General shape shall be "cobrahead" style, with flat glass lens and full cutoff optics.
2. Light pattern distribution shall be IES Type III.
3. The reflector of all luminaires shall be of a snap-in design or secured with screws. The reflector shall be polished aluminum or prismatic borosilicate glass.

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4. Flat lenses shall be formed from heat resistant, high-impact, molded borosilicate or tempered glass.
5. The lens shall be mounted in a doorframe assembly, which shall be hinged to the luminaire and secured in the closed position to the luminaire by means of an automatic latch. The lens and doorframe assembly, when closed, shall exert pressure against a gasket seat. The lens shall not allow any light output above 90 degrees nadir. Gaskets shall be composed of material capable of withstanding the temperatures involved and shall be securely held in place.
6. The ballast shall be mounted on a separate exterior door, which shall be hinged to the luminaire and secured in the closed position to the luminaire housing by means of an automatic type of latch (a combination hex/slot stainless steel screw fastener may supplement the automatic-type latch).
7. Each luminaire shall be capable of accepting a 150, 200, 250, 310, or 400 watt lamp complete and associated ballast. Lamps shall mount horizontally.

9-29.10(1)B Light Emitting Diode (LED) Conventional Roadway Luminaires

LED Conventional Roadway Luminaires are divided into classes based on their equivalent High Pressure Sodium (HPS) luminaires. Current classes are 200W, 250W, 310W, and 400W. LED luminaires are required to be pre-approved in order to verify their photometric output. To be considered for pre-approval, LED luminaires must meet the requirements of this section.

LED luminaires shall include a removable access door, with tool-less entry, for access to electronic components and the terminal block. The access door shall be removable, but include positive retention such that it can hang freely without disconnecting from the luminaire housing. LED drivers may be mounted either to the interior of the luminaire housing or to the removable door itself.

LED drivers shall be removable for user replacement. All internal modular components shall be connected by means of mechanical plug and socket type quick disconnects. Wire nuts may not be used for any purpose. All external electrical connections to the luminaire shall be made through the terminal block.

LED luminaires shall include a 7-pin NEMA photocell receptacle. The LED driver(s) shall be dimmable from ten volts to zero volts. LED output shall have a Correlated Color Temperature (CCT) of 4000K nominal (4000-4300K) and a Color Rendering Index (CRI) of 70 or greater. LED output shall be a minimum of 85% at 75,000 hours at 25 degrees Celsius.

LED luminaires shall be available for 120V, 240V, and 480V supply voltages. Voltages refer to the supply voltages to the luminaires present in the field. LED power usage shall not exceed the following maximum values for the applicable wattage class:

Class	Max. Wattage
200W	110W
250W	165W
310W	210W
400W	275W

1 Only one brand of LED conventional roadway luminaire may be used on a Contract. They
2 do not necessarily have to be the same brand as any high-mast, underdeck, or wall-mount
3 luminaires when those types of luminaires are specified in the Contract. LED luminaires
4 shall include a standard 10 year manufacturer warranty.

5
6 The list of pre-approved LED Conventional Roadway Luminaires is available at
7 <http://www.wsdot.wa.gov/Design/Traffic/ledluminaires.htm>.

8
9 **9-29.10(2) Decorative Luminaires**

10 This section, including title, is revised to read:

11

12 **9-29.10(2) Vacant**

13

14 **9-29.12 Electrical Splice Materials**

15 This section is supplemented with the following new subsections:

16

17 **9-29.12(3) Splice Enclosures**

18 **9-29.12(3)A Heat Shrink Splice Enclosure**

19 Heat shrink splice enclosures shall be medium or heavy wall cross-linked polyolefin,
20 meeting the requirements of AMS-DTL-23053/15, with thermoplastic adhesive
21 sealant. Heat shrink splices used for “wye” connections require rubber electrical
22 mastic tape.

23

24 **9-29.12(3)B Molded Splice Enclosure**

25 Molded splice enclosures shall use epoxy resin in a clear rigid plastic mold. The
26 material used shall be compatible with the insulation material of the insulated
27 conductor or cable. The component materials of the resin insulation shall be
28 packaged ready for convenient mixing without removing from the package.

29

30 **9-29.12(4) Re-Enterable Splice Enclosure**

31 Re-enterable splice enclosures shall use either dielectric grease or a flexible resin
32 contained in a two-piece plastic mold. The mold shall either snap together or use stainless
33 steel hose clamps.

34

35 **9-29.12(5) Vinyl Electrical Tape for Splices**

36 Vinyl electrical tape in splicing applications shall meet the requirements of MIL-I-24391C.

37

38 **9-29.12(1) Illumination Circuit Splices**

39 This section is revised to read:

40

41 Underground illumination circuit splices shall be solderless crimped connections capable
42 of securely joining the wires, both mechanically and electrically, as defined in Section 8-
43 20.3(8). Aerial illumination splices shall be solderless crimp connectors or split bolt vice-
44 type connectors.

45

46 **9-29.12(1)A Heat Shrink Splice Enclosure**

47 This section is deleted in its entirety.

48

49 **9-29.12(1)B Molded Splice Enclosure**

50 This section is deleted in its entirety.

51

1 **9-29.12(2) Traffic Signal Splice Material**

2 This section is revised to read:

3

4 Induction loop splices and magnetometer splices shall use an uninsulated barrel-type
5 crimped connector capable of being soldered.

6

7 **9-29.13(10)D Cabinets for Type 170E and 2070 Controllers**

8 The first sentence of item number 4 is revised to read:

9

10 A disposable paper filter element with dimensions of 12" × 16" × 1" shall be provided in
11 lieu of a metal filter.

12

13 Item number 6 is revised to read:

14

15 6. LED light strips shall be provided for cabinet lighting, powered from the Equipment
16 breaker on the Power Distribution Assembly. Each LED light strip shall be
17 approximately 12 inches long, have a minimum output of 320 lumens, and have a
18 color temperature of 4100K (cool white) or higher. There shall be three light strips for
19 each rack within the cabinet. Lighting shall be ceiling mounted – rack mounted
20 lighting is not permitted. Light strips shall be installed in the locations shown in the
21 Standard Plans. Lighting shall not interfere with the proper operation of any other
22 ceiling mounted equipment. All lighting fixtures above a rack shall energize
23 automatically when either door to that respective rack is opened. Each door switch
24 shall be labeled "Light".

25

26 Item number 7 is revised to read:

27

28 7. Rack mounted equipment shall be as shown in the Standard Plans. The cabinet
29 shall use PDA #2LX and Output File #1LX. Where an Auxiliary Output File is
30 required, Output File #2LX shall also be included.

31

32 This section is supplemented with the following new item:

33

34 9. The PCB connectors for Field Terminal Blocks FT1 through FT6 on Output Files #1LX
35 and #2LX shall be capable of accepting minimum 14 AWG field wiring, have a pitch
36 of 5.08 mm, and use screw flange type locking to secure the plug and socket
37 connection. The sockets on the Field Terminal Panel shall be secured to the panel
38 such that unplugging a connector will not result in the socket moving or separating
39 from the panel.

40

41 **9-29.13(11) Traffic Data Accumulator and Ramp Meters**

42 Item number 2 is revised to read:

43

44 2. Rack mounted equipment shall be as shown in the Standard Plans.

45

46 Item number 3 is revised to read:

47

48 3. PDA #3LX shall be furnished with three Model 200 Load Switches installed. PDA
49 #3LX shall be modified to include a second Model 430 transfer relay, mounted on the
50 rear of the PDA and wired as shown in the Standard Plans.

51

1 **9-29.13(12) ITS Cabinet**
2 This section's title is revised to read:

3
4 **Type 331L ITS Cabinet**

5
6 The first paragraph (excluding the numbered list) is revised to read:
7

8 Basic ITS cabinets shall be Model 331L Cabinets, unless otherwise specified in the
9 Contract. Type 331L Cabinets shall be constructed in accordance with the TEES, with the
10 following modifications:

11
12 Item number 6 of the first paragraph is revised to read:

- 13
14 6. LED light strips shall be provided for cabinet lighting, powered from the Equipment
15 breaker on the Power Distribution Assembly. Each LED light strip shall be
16 approximately 12 inches long, have a minimum output of 320 lumens, and have a
17 color temperature of 4100K (cool white) or higher. There shall be three light strips for
18 each rack within the cabinet. Lighting shall be ceiling mounted – rack mounted
19 lighting is not permitted. Light strips shall be installed in the locations shown in the
20 Standard Plans. Lighting shall not interfere with the proper operation of any other
21 ceiling mounted equipment. All lighting fixtures above a rack shall energize
22 automatically when either door to that respective rack is opened. Each door switch
23 shall be labeled "Light".
24

25 **9-29.16(2)E Painting Signal Heads**

26 In the first sentence, "Federal Standard 595" is revised to read "SAE AMS Standard 595".
27

28 **9-29.17 Signal Head Mounting Brackets and Fittings**

29 In the first paragraph, item number 2 under **Stainless Steel** is revised to read:
30

- 31 2. Bands or cables for Type N mount.
32

33 **9-29.20 Pedestrian Signals**

34 In item 2C of the second paragraph, "Federal Standard 595" is revised to read "SAE AMS
35 Standard 595".
36

37 **9-29.24 Service Cabinets**

38 The third sentence of item number 6 is revised to read:
39

40 The dead front cover shall have cutouts for the entire breaker array, with blank covers
41 where no circuit breakers are installed.
42

43 Item number 8 is revised to read:
44

- 45 8. Lighting contactors shall meet the requirements of Section 9-29.24(2).
46

47 The last sentence of item number 10 is revised to read:
48

49 Dead front panels shall prevent access to any exposed, live components, and shall cover
50 all equipment except for circuit breakers (including blank covers), the photocell
51 test/bypass switch, and the GFCI receptacle.
52

1 **9-29.24(2) Electrical Circuit Breakers and Contactors**

2 This section is revised to read:

3

4 All circuit breakers shall be bolt-on type, with the RMS-symmetrical interrupting capacity
5 described in this Section. Circuit breakers for 120/240/277 volt circuits shall be rated at
6 240 or 277 volts, as applicable, with an interrupting capacity of not less than 10,000
7 amperes. Circuit breakers for 480 volt circuits shall be rated at 480 volts, and shall have
8 an interrupting capacity of not less than 14,000 amperes.

9

10 Lighting contactors shall be rated for tungsten or ballasted (such as sodium vapor,
11 mercury vapor, metal halide, and fluorescent) lamp loads. Contactors for 120/240/277 volt
12 circuits shall be rated at 240 volts maximum line to line voltage, or 277 volts maximum
13 line to neutral voltage, as applicable. Contactors for 480 volt circuits shall be rated at 480
14 volt maximum line to line voltage.

15

16 **Section 9-33, Construction Geosynthetic**

17 **August 6, 2018**

18 **9-33.4(1) Geosynthetic Material Approval**

19 The second sentence of the first paragraph is revised to read:

20

21 If the geosynthetics material is not listed in the current WSDOT QPL, a Manufacturer's
22 Certificate of Compliance including Certified Test Reports of each proposed geosynthetic
23 shall be submitted to the State Materials Laboratory in Tumwater for evaluation.

24

25 The last paragraph is revised to read:

26

27 Geosynthetics used as reinforcement in permanent geosynthetic retaining walls,
28 reinforced slopes, reinforced embankments, and other geosynthetic reinforcement
29 applications require proof of compliance with the National Transportation Product
30 Evaluation Program (NTPEP) in accordance with AASHTO Standard Practice R 69,
31 Standard Practice for Determination of Long-Term Strength for Geosynthetic
32 Reinforcement.

33

34 **Section 9-34, Pavement Marking Material**

35 **January 7, 2019**

36 **9-34.2(2) Color**

37 The first sentence is revised to read:

38

39 Paint draw-downs shall be prepared according to ASTM D823.

40

41 Each reference to "Federal Standard 595" is revised to read "SAE AMS Standard 595".

42

43 **9-34.2(3) Prohibited Materials**

44 This section is revised to read:

45

46 Traffic paint shall not contain mercury, lead, chromium, diarylide pigments, toluene,
47 chlorinated solvents, hydrolysable chlorine derivatives, ethylene-based glycol ethers and
48 their acetates, nor any other EPA hazardous waste material over the regulatory levels in
49 accordance with CFR 40 Part 261.24.

50

- 1 **9-34.2(5) Low VOC Waterborne Paint**
 2 The heading “Standard Waterborne Paint” is supplemented with “Type 1 and 2”.
 3
 4 The heading “High-Build Waterborne Paint” is supplemented with “Type 4”.
 5
 6 The heading “Cold Weather Waterborne Paint” is supplemented with “Type 5”.
 7
 8 In the row beginning with “° @90°F”, each minimum value is revised to read “60”.
 9
 10 In the row beginning with “Fineness of Grind, (Hegman Scale)”, each minimum value is revised
 11 to read “3”.
 12
 13 The last four rows are replaced with the following:
 14

Vehicle Composition	ASTM D 2621	100% acrylic emulsion	100% cross-linking acrylic ⁴	100% acrylic emulsion
Freeze-Thaw Stability, KU	ASTM D 2243 and D 562	@ 5 cycles show no coagulation or change in viscosity greater than ± 10 KU	@ 5 cycles show no coagulation or change in viscosity greater than ± 10 KU	@ 3 cycles show no coagulation or change in viscosity greater than ± 10 KU
Heat Stability	ASTM D 562 ²	± 10 KU from the initial viscosity	± 10 KU from the initial viscosity	± 10 KU from the initial Viscosity
Low Temperature Film Formation	ASTM D 2805 ³	No Cracks*		No Cracks
Cold Flexibility ⁵	ASTM D522	Pass at 0.5 in mandrel*		
Test Deck Durability ⁶	ASTM D913	≥70% paint retention in wheel track*		
Mud Cracking	(See note 7)	No Cracks	No Cracks	

- 15
 16 After the preceding Amendments are applied, the following new column is inserted after the
 17 “Standard Waterborne Paint Type 1 and 2” column:
 18

Semi-Durable Waterborne Paint Type 3			
White		Yellow	
Min.	Max.	Min.	Max.
Within ± 0.3 of qualification sample			
80	95	80	95
60		60	
77		77	
	65		65
43		43	
	1.25		1.25
3		3	
0.98		0.96	
88		50	
100°		100°	

9.5		9.5	
	10		10
100% acrylic emulsion			
@ 5 cycles show no coagulation or change in viscosity greater than ± 10 KU			
± 10 KU from the initial viscosity			
No Cracks			
Pass at 0.25 in mandrel			
≥70% paint retention in wheel track			
No Cracks			

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The footnotes are supplemented with the following:

⁴Cross-linking acrylic shall meet the requirements of federal specification TT-P-1952F Section 3.1.1.

⁵Cold Flexibility: The paint shall be applied to an aluminum panel at a wet film thickness of 15 mils and allowed to dry under ambient conditions (50±10% RH and 72±5 °F) for 24 hours. A cylindrical mandrel apparatus (in accordance with ASTM D522 method B) shall be put in a 40°F refrigerator when the paint is drawn down. After 24 hours, the aluminum panel with dry paint shall be put in the 40°F refrigerator with the mandrel apparatus for 2 hours. After 2 hours, the panel and test apparatus shall be removed and immediately tested to according to ASTM D522 to evaluate cold flexibility. Paint must show no evidence of cracking, chipping or flaking when bent 180 degrees over a mandrel bar of specified diameter.

⁶NTPEP test deck, or a test deck conforming to ASTM D713, shall be conducted for a minimum of six months with the following additional requirements: it shall be applied at 15 wet mils to a test deck that is located at 40N latitude or higher with at least 10,000 ADT and which was applied during the months of September through November.

⁷Paint is applied to an approximately 4"x12" aluminum panel using a drawdown bar with a 50 mil gap. The coated panel is allowed to dry under ambient conditions (50±10% RH and 72±5 °F) for 24 hours. Visual evaluation of the dry film shall reveal no cracks.

9-34.3 Plastic

In the first sentence of the last paragraph, "Federal Standard 595" is revised to read "SAE AMS Standard 595".

9-34.3(2) Type B – Pre-Formed Fused Thermoplastic

In the last two paragraphs, each reference to "Federal Standard 595" is revised to read "SAE AMS Standard 595".

9-34.3(4) Type D – Liquid Cold Applied Methyl Methacrylate

The Test Method value for **Adhesion to PCC or HMA, psi** is revised to read "ASTM D4541¹".

9-34.4 Glass Beads for Pavement Marking Materials

In the Test Method column of the table titled Metal Concentration Limits, "EPA 3052 SW-846 6010C" is revised to read "EPA 3052 SW-846 6010D".

1 **9-34.5(1) Temporary Pavement Marking Tape – Short Duration**

2 This section, including title, is revised to read:

3

4 **9-34.5(1) Temporary Pavement Marking Tape – Short Duration (Removable)**

5 Temporary pavement marking tape for short duration (usage is for up to two months) shall
6 conform to ASTM D4592 Type I except that black tape, black mask tape and the black
7 portion of the contrast removable tape, shall be non-reflective.

8

9 **9-34.5(2) Temporary Pavement Marking Tape – Long Duration**

10 This section's title is revised to read:

11

12 **Temporary Pavement Marking Tape – Long Duration (Non-Removable)**

13

14 The first sentence is revised to read:

15

16 Temporary pavement marking tape for long duration (usage is for greater than two months
17 and less than one year) shall conform to ASTM D4592 Type II.

18

19 ASTM E2176 is deleted from the second sentence.

20

21 **9-34.7(1) Requirements**

22 The first paragraph is revised to read:

23

24 Field performance evaluation is required for low VOC solvent-based paint per Section 9-
25 34.2(4), Type A – liquid hot applied thermoplastic per Section 9-34.3(1), Type B –
26 preformed fused thermoplastic per Section 9-34.3(2), Type C – cold applied preformed
27 tape per Section 9-34.3(3), and Type D – liquid applied methyl methacrylate per Section
28 9-34.3(4).

29

30 The last paragraph is deleted.

31

32 **9-34.7(1)C Auto No-Track Time**

33 The first paragraph is revised to read:

34

35 Auto No-Track Time will only be required for low VOC solvent-based paint in accordance
36 with Section 9-34.2(4).

37

38 The second and third sentences of the second paragraph are deleted.

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INTRODUCTION TO THE SPECIAL PROVISIONS

(August 14, 2013 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2018 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by the Amendments to the Standard Specifications and these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The project-specific Special Provisions are not labeled as such. The GSPs are labeled under the headers of each GSP, with the effective date of the GSP and its source. For example:

(March 8, 2013 APWA GSP)

(April 1, 2013 WSDOT GSP)

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA, current edition

Contractor shall obtain copies of these publications, at Contractor's own expense.

Division 1 General Requirements

DESCRIPTION OF WORK

(March 13, 1995)

This Contract provides for the improvement of *** the intersection of Log Yard Road and SR 3 including roundabout construction, Log Yard Road extension construction, frontage road construction, pavement, pavement reconstruction, sidewalk, ADA facilities, stormwater facilities, illumination, signing, striping, *** and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

1 **1-01.3 Definitions**
2 *(January 4, 2016 APWA GSP)*

3
4 Delete the heading **Completion Dates** and the three paragraphs that follow it, and replace
5 them with the following:
6

7 **Dates**

8 ***Bid Opening Date***

9 The date on which the Contracting Agency publicly opens and reads the Bids.

10 ***Award Date***

11 The date of the formal decision of the Contracting Agency to accept the lowest
12 responsible and responsive Bidder for the Work.

13 ***Contract Execution Date***

14 The date the Contracting Agency officially binds the Agency to the Contract.

15 ***Notice to Proceed Date***

16 The date stated in the Notice to Proceed on which the Contract time begins.

17 ***Substantial Completion Date***

18 The day the Engineer determines the Contracting Agency has full and unrestricted
19 use and benefit of the facilities, both from the operational and safety standpoint, any
20 remaining traffic disruptions will be rare and brief, and only minor incidental work,
21 replacement of temporary substitute facilities, plant establishment periods, or
22 correction or repair remains for the Physical Completion of the total Contract.

23 ***Physical Completion Date***

24 The day all of the Work is physically completed on the project. All documentation
25 required by the Contract and required by law does not necessarily need to be
26 furnished by the Contractor by this date.

27 ***Completion Date***

28 The day all the Work specified in the Contract is completed and all the obligations of
29 the Contractor under the contract are fulfilled by the Contractor. All documentation
30 required by the Contract and required by law must be furnished by the Contractor
31 before establishment of this date.

32 ***Final Acceptance Date***

33 The date on which the Contracting Agency accepts the Work as complete.
34

35 Supplement this Section with the following:
36

37 All references in the Standard Specifications, Amendments, or WSDOT General Special
38 Provisions, to the terms "Department of Transportation", "Washington State
39 Transportation Commission", "Commission", "Secretary of Transportation", "Secretary",
40 "Headquarters", and "State Treasurer" shall be revised to read "Contracting Agency".
41

42 All references to the terms "State" or "state" shall be revised to read "Contracting
43 Agency" unless the reference is to an administrative agency of the State of Washington,
44 a State statute or regulation, or the context reasonably indicates otherwise.
45

46 All references to "State Materials Laboratory" shall be revised to read "Contracting
47 Agency designated location".
48

1 All references to “final contract voucher certification” shall be interpreted to mean the
2 Contracting Agency form(s) by which final payment is authorized, and final completion
3 and acceptance granted.
4

5 **Additive**

6 A supplemental unit of work or group of bid items, identified separately in the Bid
7 Proposal, which may, at the discretion of the Contracting Agency, be awarded in addition
8 to the base bid.
9

10 **Alternate**

11 One of two or more units of work or groups of bid items, identified separately in the Bid
12 Proposal, from which the Contracting Agency may make a choice between different
13 methods or material of construction for performing the same work.
14

15 **Business Day**

16 A business day is any day from Monday through Friday except holidays as listed in
17 Section 1-08.5.
18

19 **Contract Bond**

20 The definition in the Standard Specifications for “Contract Bond” applies to whatever
21 bond form(s) are required by the Contract Documents, which may be a combination of a
22 Payment Bond and a Performance Bond.
23

24 **Contract Documents**

25 See definition for “Contract”.
26

27 **Contract Time**

28 The period of time established by the terms and conditions of the Contract within which
29 the Work must be physically completed.
30

31 **Notice of Award**

32 The written notice from the Contracting Agency to the successful Bidder signifying the
33 Contracting Agency’s acceptance of the Bid Proposal.
34

35 **Notice to Proceed**

36 The written notice from the Contracting Agency or Engineer to the Contractor authorizing
37 and directing the Contractor to proceed with the Work and establishing the date on which
38 the Contract time begins.
39

40 **Traffic**

41 Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and
42 equestrian traffic.
43

44 **1-02 BID PROCEDURES AND CONDITIONS**

45 **1-02.1 Prequalification of Bidders**

46 Delete this section and replace it with the following:
47

48 **1-02.1 Qualifications of Bidder**

49 *(January 24, 2011 APWA GSP)*
50
51
52

1 Before award of a public works contract, a bidder must meet at least the minimum
2 qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to
3 be awarded a public works project.

4
5 **1-02.2 Plans and Specifications**
6 *(June 27, 2011 APWA GSP)*

7
8 Delete this section and replace it with the following:

9
10 Information as to where Bid Documents can be obtained or reviewed can be found in the
11 Call for Bids (Advertisement for Bids) for the work.

12
13 After award of the contract, plans and specifications will be issued to the Contractor at no
14 cost as detailed below:

15

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	1	Furnished automatically upon award.
Contract Provisions	1	Furnished automatically upon award.
Large plans (e.g., 22" x 34")	1	Furnished only upon request.

16
17 Additional plans and Contract Provisions may be obtained by the Contractor from the
18 source stated in the Call for Bids, at the Contractor's own expense.

19
20 **1-02.4(1) General**
21 *(August 15, 2016 APWA GSP Option A)*

22
23 The first sentence of the last paragraph is revised to read:

24
25 Any prospective Bidder desiring an explanation or interpretation of the Bid Documents,
26 must request the explanation or interpretation in writing soon enough to allow a written
27 reply to reach all prospective Bidders before the submission of their Bids.

28
29 **1-02.4(2) Subsurface Information**
30 *(March 8, 2013 APWA GSP)*

31 The second sentence in the first paragraph is revised to read:

32
33 The Summary of Geotechnical Conditions and the boring logs, if and when included
34 as an appendix to the Special Provisions, shall be considered as part of the Contract.

35

1 **1-02.5 Proposal Forms**

2

3 (*****)

4

5 Delete this section and replace it with the following:

6

7 The Contracting Agency will provide a Proposal Form(s) within or as part of an issued
8 Advertisement for Bids.

9

10 The Proposal Form will identify the project and its location. It will also list a Schedule of
11 Values. The Bidder shall complete spaces on the Proposal Form that call for but are not
12 limited to: the Schedule of Values, signatures, dates, acknowledgement of Addenda, and
13 the Bidder's address. The required certifications are included as part of the Proposal
14 Form.

15

16 **1-02.6 Preparation of Proposal**

17 (*****)

18 Revise the second paragraph with the following:

- 19 1. A total price for each Schedule on the Proposal,
20 2. (Not used)
21 3. The total Contract price (the sum of all the Schedule of Values)

22

23 Supplement the second paragraph with the following:

- 24 4. If a minimum bid amount has been established for any item, the unit or lump sum
25 price must equal or exceed the minimum amount stated.
26 5. Any correction to a bid made by interlineation, alteration, or erasure, shall be
27 initialed by the signer of the bid.

28

29 Delete the last two paragraphs, and replace them with the following:

30

31 If no Subcontractor is listed, the Bidder acknowledges that it does not intend to use any
32 Subcontractor to perform those items of work.

33

34 The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

35

36 A bid by a corporation shall be executed in the corporate name, by the president or a
37 vice president (or other corporate officer accompanied by evidence of authority to sign).

38

39 A bid by a partnership shall be executed in the partnership name, and signed by a
40 partner. A copy of the partnership agreement shall be submitted with the Bid Form if any
41 UDBE requirements are to be satisfied through such an agreement.

42

43 A bid by a joint venture shall be executed in the joint venture name and signed by a
44 member of the joint venture. A copy of the joint venture agreement shall be submitted
45 with the Bid Form if any UDBE requirements are to be satisfied through such an
46 agreement.

47

1 **1-02.7 Bid Deposit**
2 *(March 8, 2013 APWA GSP)*

3
4 Supplement this section with the following:

5
6 Bid bonds shall contain the following:

- 7 1. Contracting Agency-assigned number for the project;
- 8 2. Name of the project;
- 9 3. The Contracting Agency named as obligee;
- 10 4. The amount of the bid bond stated either as a dollar figure or as a percentage which
11 represents five percent of the maximum bid amount that could be awarded;
- 12 5. Signature of the bidder's officer empowered to sign official statements. The signature
13 of the person authorized to submit the bid should agree with the signature on the
14 bond, and the title of the person must accompany the said signature;
- 15 6. The signature of the surety's officer empowered to sign the bond and the power of
16 attorney.

17
18 If so stated in the Contract Provisions, bidder must use the bond form included in the
19 Contract Provisions.

20
21 If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.

22
23 **1-02.9 Delivery of Proposal**
24 *(May 17, 2018 APWA GSP, Option A)*

25
26 Delete this section and replace it with the following:

27
28 Each Proposal shall be submitted in a sealed envelope, with the Project Name and
29 Project Number as stated in the Call for Bids clearly marked on the outside of the
30 envelope, or as otherwise required in the Bid Documents, to ensure proper handling and
31 delivery.

32
33 To be considered responsive on a FHWA-funded project, the Bidder may be required to
34 submit the following items, as required by Section 1-02.6:

- 35
- 36 • UDBE Written Confirmation Document from each UDBE firm listed on the
- 37 Bidder's completed UDBE Utilization Certification (WSDOT 272-056U)
- 38 • Good Faith Effort (GFE) Documentation
- 39

40 These documents, if applicable, shall be received either with the Bid Proposal or as a
41 supplement to the Bid. These documents shall be received **no later than 24 hours** (not
42 including Saturdays, Sundays and Holidays) after the time for delivery of the Bid
43 Proposal.

44
45 If submitted after the Bid Proposal is due, the document(s) must be submitted in a sealed
46 envelope labeled the same as for the Proposal, with "Supplemental Information" added.
47 All other information required to be submitted with the Bid Proposal must be submitted
48 with the Bid Proposal itself, at the time stated in the Call for Bids.

49

1 The Contracting Agency will not open or consider any Bid Proposal that is received after
2 the time specified in the Call for Bids for receipt of Bid Proposals, or received in a
3 location other than that specified in the Call for Bids. The Contracting Agency will not
4 open or consider any "Supplemental Information" (UDBE confirmations, or GFE
5 documentation) that is received after the time specified above, or received in a location
6 other than that specified in the Call for Bids.
7

8 **1-02.10 Withdrawing, Revising, or Supplementing Proposal**
9 *(July 23, 2015 APWA GSP)*

10
11 Delete this section, and replace it with the following:

12
13 After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may
14 withdraw, revise, or supplement it if:

- 15
16 1. The Bidder submits a written request signed by an authorized person and
17 physically delivers it to the place designated for receipt of Bid Proposals, and
18 2. The Contracting Agency receives the request before the time set for receipt of
19 Bid Proposals, and
20 3. The revised or supplemented Bid Proposal (if any) is received by the Contracting
21 Agency before the time set for receipt of Bid Proposals.
22

23 If the Bidder's request to withdraw, revise, or supplement its Bid Proposal is received
24 before the time set for receipt of Bid Proposals, the Contracting Agency will return the
25 unopened Proposal package to the Bidder. The Bidder must then submit the revised or
26 supplemented package in its entirety. If the Bidder does not submit a revised or
27 supplemented package, then its bid shall be considered withdrawn.
28

29 Late revised or supplemented Bid Proposals or late withdrawal requests will be date
30 recorded by the Contracting Agency and returned unopened. Mailed, emailed, or faxed
31 requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.
32

33 **Public Opening of Proposals**

34
35 Section 1-02.12 is supplemented with the following:

36
37 ***(August 3, 2015)***
38 ***Date of Opening Bids***

39 The bid opening date for this project is *** September 20, 2019 ***. Bids received will be
40 publicly opened and read after 11:00:59 A. M. Pacific Time on this date.
41

42 **1-02.13 Irregular Proposals**
43 *(June 20, 2017 APWA GSP)*

44
45 Delete this section and replace it with the following:

- 46
47 1. A Proposal will be considered irregular and will be rejected if:
48 a. The Bidder is not prequalified when so required;
49 b. The authorized Proposal form furnished by the Contracting Agency is not
50 used or is altered;
51 c. The completed Proposal form contains any unauthorized additions, deletions,
52 alternate Bids, or conditions;

- 1 d. The Bidder adds provisions reserving the right to reject or accept the award,
2 or enter into the Contract;
 - 3 e. A price per unit cannot be determined from the Bid Proposal;
 - 4 f. The Proposal form is not properly executed;
 - 5 g. The Bidder fails to submit or properly complete a Subcontractor list, if
6 applicable, as required in Section 1-02.6;
 - 7 h. The Bidder fails to submit or properly complete an Underutilized
8 Disadvantaged Business Enterprise Certification, if applicable, as required in
9 Section 1-02.6;
 - 10 i. The Bidder fails to submit written confirmation from each UDBE firm listed on
11 the Bidder's completed UDBE Utilization Certification that they are in
12 agreement with the bidder's UDBE participation commitment, if applicable, as
13 required in Section 1-02.6, or if the written confirmation that is submitted fails
14 to meet the requirements of the Special Provisions;
 - 15 j. The Bidder fails to submit UDBE Good Faith Effort documentation, if
16 applicable, as required in Section 1-02.6, or if the documentation that is
17 submitted fails to demonstrate that a Good Faith Effort to meet the Condition
18 of Award was made;
 - 19 k. The Bid Proposal does not constitute a definite and unqualified offer to meet
20 the material terms of the Bid invitation; or
 - 21 l. More than one Proposal is submitted for the same project from a Bidder
22 under the same or different names.
- 23
- 24 2. A Proposal may be considered irregular and may be rejected if:
 - 25 a. The Proposal does not include a unit price for every Bid item;
 - 26 b. Any of the unit prices are excessively unbalanced (either above or below the
27 amount of a reasonable Bid) to the potential detriment of the Contracting
28 Agency;
 - 29 c. Receipt of Addenda is not acknowledged;
 - 30 d. A member of a joint venture or partnership and the joint venture or
31 partnership submit Proposals for the same project (in such an instance, both
32 Bids may be rejected); or
 - 33 e. If Proposal form entries are not made in ink.
- 34

35 **1-02.14 Disqualification of Bidders**

36 *(May 17, 2018 APWA GSP, Option A)*

37
38 Delete this section and replace it with the following:

39
40 A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder
41 responsibility criteria in RCW 39.04.350(1), as amended.

42
43 The Contracting Agency will verify that the Bidder meets the mandatory bidder
44 responsibility criteria in RCW 39.04.350(1). To assess bidder responsibility, the
45 Contracting Agency reserves the right to request documentation as needed from the
46 Bidder and third parties concerning the Bidder's compliance with the mandatory bidder
47 responsibility criteria.

48
49 If the Contracting Agency determines the Bidder does not meet the mandatory bidder
50 responsibility criteria in RCW 39.04.350(1) and is therefore not a responsible Bidder, the
51 Contracting Agency shall notify the Bidder in writing, with the reasons for its determination.
52 If the Bidder disagrees with this determination, it may appeal the determination within two

1 (2) business days of the Contracting Agency's determination by presenting its appeal and
2 any additional information to the Contracting Agency. The Contracting Agency will
3 consider the appeal and any additional information before issuing its final determination.
4 If the final determination affirms that the Bidder is not responsible, the Contracting Agency
5 will not execute a contract with any other Bidder until at least two business days after the
6 Bidder determined to be not responsible has received the Contracting Agency's final
7 determination.
8

9 **1-02.15 Pre Award Information**

10 *(August 14, 2013 APWA GSP)*

11
12 Revise this section to read:

13
14 Before awarding any contract, the Contracting Agency may require one or more of these
15 items or actions of the apparent lowest responsible bidder:

- 16 1. A complete statement of the origin, composition, and manufacture of any or all
17 materials to be used,
- 18 2. Samples of these materials for quality and fitness tests,
- 19 3. A progress schedule (in a form the Contracting Agency requires) showing the order
20 of and time required for the various phases of the work,
- 21 4. A breakdown of costs assigned to any bid item,
- 22 5. Attendance at a conference with the Engineer or representatives of the Engineer,
- 23 6. Obtain, and furnish a copy of, a business license to do business in the city or county
24 where the work is located.
- 25 7. Any other information or action taken that is deemed necessary to ensure that the
26 bidder is the lowest responsible bidder.
27

28
29 **1-03.1 Consideration of Bids**

30 *(January 23, 2006 APWA GSP)*

31
32 Revise the first paragraph to read:

33
34 After opening and reading proposals, the Contracting Agency will check them for
35 correctness of extensions of the prices per unit and the total price. If a discrepancy exists
36 between the price per unit and the extended amount of any bid item, the price per unit will
37 control. If a minimum bid amount has been established for any item and the bidder's unit
38 or lump sum price is less than the minimum specified amount, the Contracting Agency will
39 unilaterally revise the unit or lump sum price, to the minimum specified amount and
40 recalculate the extension. The total of extensions, corrected where necessary, including
41 sales taxes where applicable and such additives and/or alternates as selected by the
42 Contracting Agency, will be used by the Contracting Agency for award purposes and to fix
43 the Awarded Contract Price amount and the amount of the contract bond.
44

45 **1-03.1(1) Identical Bid Totals**

46 *(January 4, 2016 APWA GSP)*

47
48 Revise this section to read:

49
50 After opening Bids, if two or more lowest responsive Bid totals are exactly equal, then
51 the tie-breaker will be the Bidder with an equal lowest bid, that proposed to use the

1 highest percentage of recycled materials in the Project, per the form submitted with the
2 Bid Proposal. If those percentages are also exactly equal, then the tie-breaker will be
3 determined by drawing as follows: Two or more slips of paper will be marked as follows:
4 one marked "Winner" and the other(s) marked "unsuccessful". The slips will be folded to
5 make the marking unseen. The slips will be placed inside a box. One authorized
6 representative of each Bidder shall draw a slip from the box. Bidders shall draw in
7 alphabetic order by the name of the firm as registered with the Washington State
8 Department of Licensing. The slips shall be unfolded and the firm with the slip marked
9 "Winner" will be determined to be the successful Bidder and eligible for Award of the
10 Contract. Only those Bidders who submitted a Bid total that is exactly equal to the lowest
11 responsive Bid, and with a proposed recycled materials percentage that is exactly equal
12 to the highest proposed recycled materials amount, are eligible to draw.

13
14 **1-03.3 Execution of Contract**
15 *(October 1, 2005 APWA GSP)*

16
17 Revise this section to read:

18
19 Copies of the Contract Provisions, including the unsigned Form of Contract, will be
20 available for signature by the successful bidder on the first business day following award.
21 The number of copies to be executed by the Contractor will be determined by the
22 Contracting Agency.

23
24 Within 10 calendar days after the award date, the successful bidder shall return the
25 signed Contracting Agency-prepared contract, an insurance certification as required by
26 Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Before
27 execution of the contract by the Contracting Agency, the successful bidder shall provide
28 any pre-award information the Contracting Agency may require under Section 1-02.15.

29
30 Until the Contracting Agency executes a contract, no proposal shall bind the Contracting
31 Agency nor shall any work begin within the project limits or within Contracting Agency-
32 furnished sites. The Contractor shall bear all risks for any work begun outside such areas
33 and for any materials ordered before the contract is executed by the Contracting Agency.

34
35 If the bidder experiences circumstances beyond their control that prevents return of the
36 contract documents within the calendar days after the award date stated above, the
37 Contracting Agency may grant up to a maximum of 5 additional calendar days for return
38 of the documents, provided the Contracting Agency deems the circumstances warrant it.

39
40
41 **1-03.4 Contract Bond**
42 *(July 23, 2015 APWA GSP)*

43
44 Delete the first paragraph and replace it with the following:

45
46 The successful bidder shall provide executed payment and performance bond(s) for the
47 full contract amount. The bond may be a combined payment and performance bond; or
48 be separate payment and performance bonds. In the case of separate payment and
49 performance bonds, each shall be for the full contract amount. The bond(s) shall:

- 50 1. Be on Contracting Agency-furnished form(s);
51 2. Be signed by an approved surety (or sureties) that:
52 a. Is registered with the Washington State Insurance Commissioner, and

- 1 b. Appears on the current Authorized Insurance List in the State of Washington
2 published by the Office of the Insurance Commissioner,
3 3. Guarantee that the Contractor will perform and comply with all obligations, duties,
4 and conditions under the Contract, including but not limited to the duty and obligation
5 to indemnify, defend, and protect the Contracting Agency against all losses and
6 claims related directly or indirectly from any failure:
7 a. Of the Contractor (or any of the employees, subcontractors, or lower tier
8 subcontractors of the Contractor) to faithfully perform and comply with all contract
9 obligations, conditions, and duties, or
10 b. Of the Contractor (or the subcontractors or lower tier subcontractors of the
11 Contractor) to pay all laborers, mechanics, subcontractors, lower tier
12 subcontractors, material person, or any other person who provides supplies or
13 provisions for carrying out the work;
14 4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the
15 project under titles 50, 51, and 82 RCW; and
16 5. Be accompanied by a power of attorney for the Surety's officer empowered to sign
17 the bond; and
18 6. Be signed by an officer of the Contractor empowered to sign official statements (sole
19 proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed
20 by the president or vice president, unless accompanied by written proof of the
21 authority of the individual signing the bond(s) to bind the corporation (i.e., corporate
22 resolution, power of attorney, or a letter to such effect signed by the president or vice
23 president).

24
25 **1-03.7 Judicial Review**
26 *(November 30, 2018 APWA GSP)*

27
28 Revise this section to read:

29
30 Any decision made by the Contracting Agency regarding the Award and execution of the
31 Contract or Bid rejection shall be conclusive subject to the scope of judicial review
32 permitted under Washington Law. Such review, if any, shall be timely filed in the Superior
33 Court of the county where the Contracting Agency headquarters is located, provided that
34 where an action is asserted against a county, RCW 36.01.050 shall control venue and
35 jurisdiction.
36

37 **Conformity With And Deviations From Plans And Stakes**

38
39 Section 1-05.4 is supplemented with the following:
40

41 **(*****)**

42
43 **Contractor Surveying - Roadway**

44 Copies of the Contracting Agency provided primary survey control data are available for
45 the bidder's inspection at the office of the Engineer.
46

47 The Contractor shall be responsible for setting, maintaining, and resetting all alignment
48 stakes, slope stakes, and grades necessary for the construction of the roadbed, drainage,
49 surfacing, paving, channelization and pavement marking, illumination and signals,
50 guardrails and barriers, and signing. Except for the survey control data to be furnished

1 by the Contracting Agency, calculations, surveying, and measuring required for setting
2 and maintaining the necessary lines and grades shall be the Contractor's responsibility.
3
4 The Contractor shall inform the Engineer when monuments are discovered that were not
5 identified in the Plans and construction activity may disturb or damage the monuments.
6 All monuments noted on the plans "DO NOT DISTURB" shall be protected throughout the
7 length of the project or be replaced at the Contractors expense.
8
9 Detailed survey records shall be maintained, including a description of the work
10 performed on each shift, the methods utilized, and the control points used. The record
11 shall be adequate to allow the survey to be reproduced. A copy of each day's record shall
12 be provided to the Engineer within three working days after the end of the shift.
13
14 The meaning of words and terms used in this provision shall be as listed in "Definitions of
15 Surveying and Associated Terms" current edition, published by the American Congress
16 on Surveying and Mapping and the American Society of Civil Engineers.
17
18 The survey work shall include but not be limited to the following:
19
20 1. Verify the primary horizontal and vertical control furnished by the Contracting
21 Agency, and expand into secondary control by adding stakes and hubs as well
22 as additional survey control needed for the project. Provide descriptions of
23 secondary control to the Contracting Agency. The description shall include
24 coordinates and elevations of all secondary control points.
25
26 2. Establish, the centerlines of all alignments, by placing hubs, stakes, or marks on
27 centerline or on offsets to centerline at all curve points (PCs, PTs, and PIs) and
28 at points on the alignments spaced no further than 50 feet.
29
30 3. Establish clearing limits, placing stakes at all angle points and at intermediate
31 points not more than 50 feet apart. The clearing and grubbing limits shall be 5
32 feet beyond the toe of a fill and 10 feet beyond the top of a cut unless otherwise
33 shown in the Plans.
34
35 4. Establish grading limits, placing slope stakes at centerline increments not more
36 than 50 feet apart. Establish offset reference to all slope stakes. If Global
37 Positioning Satellite (GPS) Machine Controls are used to provide grade control,
38 then slope stakes may be omitted at the discretion of the Contractor
39
40 5. Establish the horizontal and vertical location of all drainage features, placing
41 offset stakes to all drainage structures and to pipes at a horizontal interval not
42 greater than 25 feet.
43
44 6. Establish roadbed and surfacing elevations by placing stakes at the top of
45 subgrade and at the top of each course of surfacing. Subgrade and surfacing
46 stakes shall be set at horizontal intervals not greater than 50 feet in tangent
47 sections, 25 feet in curve sections with a radius less than 300 feet, and at 10-
48 foot intervals in intersection radii with a radius less than 10 feet. Transversely,
49 stakes shall be placed at all locations where the roadway slope changes and at
50 additional points such that the transverse spacing of stakes is not more than 12
51 feet. If GPS Machine Controls are used to provide grade control, then roadbed
52 and surfacing stakes may be omitted at the discretion of the Contractor.

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7. Establish intermediate elevation benchmarks as needed to check work throughout the project.
8. Provide references for paving pins at 25-foot intervals or provide simultaneous surveying to establish location and elevation of paving pins as they are being placed.
9. For all other types of construction included in this provision, (including but not limited to channelization and pavement marking, illumination and signals, guardrails and barriers, and signing) provide staking and layout as necessary to adequately locate, construct, and check the specific construction activity.
10. Contractor shall determine if changes are needed to the profiles or roadway sections shown in the Contract Plans in order to achieve proper smoothness and drainage where matching into existing features, such as a smooth transition from new pavement to existing pavement. The Contractor shall submit these changes to the Engineer for review and approval 10 days prior to the beginning of work.

The Contractor shall provide the Contracting Agency copies of any calculations and staking data when requested by the Engineer.

To facilitate the establishment of these lines and elevations, the Contracting Agency will provide the Contractor with primary survey control information consisting of descriptions of two primary control points used for the horizontal and vertical control, and descriptions of two additional primary control points for every additional three miles of project length. Primary control points will be described by reference to the project alignment and the coordinate system and elevation datum utilized by the project. In addition, the Contracting Agency will supply horizontal coordinates for the beginning and ending points and for each Point of Intersection (PI) on each alignment included in the project.

The Contractor shall ensure a surveying accuracy within the following tolerances:

	<u>Vertical</u>	<u>Horizontal</u>
Slope stakes	±0.10 feet	±0.10 feet
Subgrade grade stakes set 0.04 feet below grade	±0.01 feet	±0.5 feet (parallel to alignment) ±0.1 feet (normal to alignment)
Stationing on roadway	N/A	±0.1 feet
Alignment on roadway	N/A	±0.04 feet
Surfacing grade stakes	±0.01 feet	±0.5 feet (parallel to alignment) ±0.1 feet (normal to alignment)

1	Roadway paving pins for		
2	surfacing or paving	±0.01 feet	±0.2 feet
3			(parallel to alignment)
4			±0.1 feet
5			(normal to alignment)
6			

7 The Contracting Agency may spot-check the Contractor's surveying. These spot-checks
8 will not change the requirements for normal checking by the Contractor.

10 When staking roadway alignment and stationing, the Contractor shall perform
11 independent checks from different secondary control to ensure that the points staked are
12 within the specified survey accuracy tolerances.

14 The Contractor shall calculate coordinates for the alignment. The Contracting Agency will
15 verify these coordinates prior to issuing approval to the Contractor for commencing with
16 the work. The Contracting Agency will require up to seven calendar days from the date
17 the data is received.

19 Contract work to be performed using contractor-provided stakes shall not begin until the
20 stakes are approved by the Contracting Agency. Such approval shall not relieve the
21 Contractor of responsibility for the accuracy of the stakes.

23 Stakes shall be marked in accordance with Standard Plan A10.10. When stakes are
24 needed that are not described in the Plans, then those stakes shall be marked, at no
25 additional cost to the Contracting Agency as ordered by the Engineer.

27 **Payment**

28 Payment will be made for the following bid under the "Schedule of Values":

30 "Roadway Surveying", lump sum.

32 The lump sum contract price for "Roadway Surveying" shall be full pay for all labor,
33 equipment, materials, and supervision utilized to perform the Work specified, including
34 any resurveying, checking, correction of errors, replacement of missing or damaged
35 stakes, and coordination efforts. Prices shall also include ADA surveying and Record
36 Drawings.

38 **(*****)**

40 **Contractor Surveying – ADA Features**

41 **ADA Feature Staking Requirements**

42 The Contractor shall be responsible for setting, maintaining, and resetting all
43 alignment stakes, and grades necessary for the construction of the ADA features.
44 Calculations, surveying, and measuring required for setting and maintaining the
45 necessary lines and grades shall be the Contractor's responsibility. The Contractor
46 shall build the ADA features within the specifications in the Standard Plans and
47 contract documents.

49 **ADA Feature As-Built Measurements**

50 The Contractor shall be responsible for providing electronic As-Built records of all
51 ADA feature improvements completed in the Contract.

1
2 The survey work shall include but not be limited to completing the measurements,
3 recording the required measurements and completing other data fill-ins found on the
4 ADA Measurement Forms, and transmitting the electronic Forms to the Engineer.
5 The ADA Measurement Forms are found at the following website location:
6

7 <http://www.wsdot.wa.gov/Design/ADAGuidance.htm>
8

9 In the instance where an ADA Feature does not meet accessibility requirements, all
10 work to replace non-conforming work and then to measure, record the as-built
11 measurements, and transmit the electronic Forms to the Engineer shall be completed
12 at no additional cost to the Contracting Agency, as ordered by the Engineer.
13

14 **Payment**

15 ADA Features Surveying shall be included in the "Surveying" Value of work.
16

17 **1-05.7 Removal of Defective and Unauthorized Work**
18 *(October 1, 2005 APWA GSP)*
19

20 Supplement this section with the following:
21

22 If the Contractor fails to remedy defective or unauthorized work within the time specified
23 in a written notice from the Engineer, or fails to perform any part of the work required by
24 the Contract Documents, the Engineer may correct and remedy such work as may be
25 identified in the written notice, with Contracting Agency forces or by such other means as
26 the Contracting Agency may deem necessary.
27

28 If the Contractor fails to comply with a written order to remedy what the Engineer
29 determines to be an emergency situation, the Engineer may have the defective and
30 unauthorized work corrected immediately, have the rejected work removed and replaced,
31 or have work the Contractor refuses to perform completed by using Contracting Agency
32 or other forces. An emergency situation is any situation when, in the opinion of the
33 Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk
34 of loss or damage to the public.
35

36 Direct or indirect costs incurred by the Contracting Agency attributable to correcting and
37 remedying defective or unauthorized work, or work the Contractor failed or refused to
38 perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from
39 monies due, or to become due, the Contractor. Such direct and indirect costs shall
40 include in particular, but without limitation, compensation for additional professional
41 services required, and costs for repair and replacement of work of others destroyed or
42 damaged by correction, removal, or replacement of the Contractor's unauthorized work.
43

44 No adjustment in contract time or compensation will be allowed because of the delay in
45 the performance of the work attributable to the exercise of the Contracting Agency's
46 rights provided by this Section.
47

48 The rights exercised under the provisions of this section shall not diminish the
49 Contracting Agency's right to pursue any other avenue for additional remedy or damages
50 with respect to the Contractor's failure to perform the work as required.
51
52

1 **1-05.11 Final Inspection**

2

3 Delete this section and replace it with the following:

4

5 **1-05.11 Final Inspections and Operational Testing**
6 *(October 1, 2005 APWA GSP)*

7

8 **1-05.11(1) Substantial Completion Date**

9

10 When the Contractor considers the work to be substantially complete, the Contractor
11 shall so notify the Engineer and request the Engineer establish the Substantial
12 Completion Date. The Contractor's request shall list the specific items of work that
13 remain to be completed in order to reach physical completion. The Engineer will
14 schedule an inspection of the work with the Contractor to determine the status of
15 completion. The Engineer may also establish the Substantial Completion Date
16 unilaterally.

17

18 If, after this inspection, the Engineer concurs with the Contractor that the work is
19 substantially complete and ready for its intended use, the Engineer, by written notice to
20 the Contractor, will set the Substantial Completion Date. If, after this inspection the
21 Engineer does not consider the work substantially complete and ready for its intended
22 use, the Engineer will, by written notice, so notify the Contractor giving the reasons
23 therefor.

24

25 Upon receipt of written notice concurring in or denying substantial completion, whichever
26 is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized
27 interruption, the work necessary to reach Substantial and Physical Completion. The
28 Contractor shall provide the Engineer with a revised schedule indicating when the
29 Contractor expects to reach substantial and physical completion of the work.

30

31 The above process shall be repeated until the Engineer establishes the Substantial
32 Completion Date and the Contractor considers the work physically complete and ready for
33 final inspection.

34

35 **1-05.11(2) Final Inspection and Physical Completion Date**

36

37 When the Contractor considers the work physically complete and ready for final
38 inspection, the Contractor by written notice, shall request the Engineer to schedule a
39 final inspection. The Engineer will set a date for final inspection. The Engineer and the
40 Contractor will then make a final inspection and the Engineer will notify the Contractor in
41 writing of all particulars in which the final inspection reveals the work incomplete or
42 unacceptable. The Contractor shall immediately take such corrective measures as are
43 necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously,
44 diligently, and without interruption until physical completion of the listed deficiencies. This
45 process will continue until the Engineer is satisfied the listed deficiencies have been
46 corrected.

47

48 If action to correct the listed deficiencies is not initiated within 7 days after receipt of the
49 written notice listing the deficiencies, the Engineer may, upon written notice to the
50 Contractor, take whatever steps are necessary to correct those deficiencies pursuant to
51 Section 1-05.7.

1 The Contractor will not be allowed an extension of contract time because of a delay in
2 the performance of the work attributable to the exercise of the Engineer's right
3 hereunder.
4

5 Upon correction of all deficiencies, the Engineer will notify the Contractor and the
6 Contracting Agency, in writing, of the date upon which the work was considered physically
7 complete. That date shall constitute the Physical Completion Date of the contract, but shall
8 not imply acceptance of the work or that all the obligations of the Contractor under the
9 contract have been fulfilled.
10

11 **1-05.11(3) Operational Testing**
12

13 It is the intent of the Contracting Agency to have at the Physical Completion Date a
14 complete and operable system. Therefore when the work involves the installation of
15 machinery or other mechanical equipment; street lighting, electrical distribution or signal
16 systems; irrigation systems; buildings; or other similar work it may be desirable for the
17 Engineer to have the Contractor operate and test the work for a period of time after final
18 inspection but prior to the physical completion date. Whenever items of work are listed in
19 the Contract Provisions for operational testing they shall be fully tested under operating
20 conditions for the time period specified to ensure their acceptability prior to the Physical
21 Completion Date. During and following the test period, the Contractor shall correct any
22 items of workmanship, materials, or equipment which prove faulty, or that are not in first
23 class operating condition. Equipment, electrical controls, meters, or other devices and
24 equipment to be tested during this period shall be tested under the observation of the
25 Engineer, so that the Engineer may determine their suitability for the purpose for which
26 they were installed. The Physical Completion Date cannot be established until testing
27 and corrections have been completed to the satisfaction of the Engineer.
28

29 The costs for power, gas, labor, material, supplies, and everything else needed to
30 successfully complete operational testing, shall be included in the unit contract prices
31 related to the system being tested, unless specifically set forth otherwise in the proposal.
32

33 Operational and test periods, when required by the Engineer, shall not affect a
34 manufacturer's guaranties or warranties furnished under the terms of the contract.
35
36

37 Add the following new section:
38

39 **1-05.12(1) One-Year Guarantee Period**
40 *(March 8, 2013 APWA GSP, may not be used on FHWA funded projects)*
41

42 The Contractor shall return to the project and repair or replace all defects in
43 workmanship and material discovered within one year after Final Acceptance of the
44 Work. The Contractor shall start work to remedy any such defects within 7 calendar
45 days of receiving Contracting Agency's written notice of a defect, and shall complete
46 such work within the time stated in the Contracting Agency's notice. In case of an
47 emergency, where damage may result from delay or where loss of services may
48 result, such corrections may be made by the Contracting Agency's own forces or
49 another contractor, in which case the cost of corrections shall be paid by the
50 Contractor. In the event the Contractor does not accomplish corrections within the

1 time specified, the work will be otherwise accomplished and the cost of same shall
2 be paid by the Contractor.

3

4 When corrections of defects are made, the Contractor shall then be responsible for
5 correcting all defects in workmanship and materials in the corrected work for one
6 year after acceptance of the corrections by Contracting Agency.

7

8 This guarantee is supplemental to and does not limit or affect the requirements that
9 the Contractor's work comply with the requirements of the Contract or any other
10 legal rights or remedies of the Contracting Agency.

11

12 **1-05.13 Superintendents, Labor and Equipment of Contractor**
13 *(August 14, 2013 APWA GSP)*

14

15 Delete the sixth and seventh paragraphs of this section.

16

17 **Cooperation With Other Contractors**

18

19 Section 1-05.14 is supplemented with the following:

20

21 *(March 13, 1995)*

22 **Other Contracts Or Other Work**

23 It is anticipated that the following work adjacent to or within the limits of this project will
24 be performed by others during the course of this project and will require coordination of
25 the work:

26

27

28

Mason PUD 3 Work

29

Mason PUD 3 will be extending lines under SR 3 as well as relocating several utility
30 poles in conjunction with this contract.

31

32

See plans for Mason PUD 3 improvements. The Contractor shall notify the Engineer
33 and Mason PUD 3 six weeks in advance of anticipated work.

34

35

CenturyLink Work

36

CenturyLink will be relocating and adjusting several facilities in conjunction with this
37 contract.

38

39

See plans for CenturyLink improvements. The area of CenturyLink's improvements
40 will need to be cleared and grubbed prior to work by CenturyLink. The Contractor
41 shall notify the Engineer and CenturyLink two weeks in advance of anticipated work.

42

43

44 **1-05.15 Method of Serving Notices**

45 *(March 25, 2009 APWA GSP)*

46 Revise the second paragraph to read:

47

48

All correspondence from the Contractor shall be directed to the Project Engineer. All
49 correspondence from the Contractor constituting any notification, notice of protest, notice

1 of dispute, or other correspondence constituting notification required to be furnished
2 under the Contract, must be in paper format, hand delivered or sent via mail delivery
3 service to the Project Engineer's office. Electronic copies such as e-mails or
4 electronically delivered copies of correspondence will not constitute such notice and will
5 not comply with the requirements of the Contract.
6

7 Add the following new section:
8

9 **1-05.16 Water and Power**
10 *(October 1, 2005 APWA GSP)*

11
12 The Contractor shall make necessary arrangements, and shall bear the costs for power
13 and water necessary for the performance of the work, unless the contract includes power
14 and water as a pay item.
15

16 Add the following new section:
17

18 **1-05.18 Record Drawings**
19 *(March 8, 2013 APWA GSP)*
20

21 The Contractor shall maintain one set of full size plans for Record Drawings, updated
22 with clear and accurate red-lined field revisions on a daily basis, and within 2 business
23 days after receipt of information that a change in Work has occurred. The Contractor
24 shall not conceal any work until the required information is recorded.
25

26 This Record Drawing set shall be used for this purpose alone, shall be kept separate
27 from other Plan sheets, and shall be clearly marked as Record Drawings. These Record
28 Drawings shall be kept on site at the Contractor's field office, and shall be available for
29 review by the Contracting Agency at all times. The Contractor shall bring the Record
30 Drawings to each progress meeting for review.
31

32 The preparation and upkeep of the Record Drawings is to be the assigned responsibility
33 of a single, experienced, and qualified individual. The quality of the Record Drawings, in
34 terms of accuracy, clarity, and completeness, is to be adequate to allow the Contracting
35 Agency to modify the computer-aided drafting (CAD) Contract Drawings to produce a
36 complete set of Record Drawings for the Contracting Agency without further investigative
37 effort by the Contracting Agency.
38

39 The Record Drawing markups shall document all changes in the Work, both concealed
40 and visible. Items that must be shown on the markups include but are not limited to:
41

- 42 • Actual dimensions, arrangement, and materials used when different than shown in
43 the Plans.
- 44 • Changes made by Change Order or Field Order.
- 45 • Changes made by the Contractor.
- 46 • Accurate locations of storm sewer, sanitary sewer, water mains and other water
47 appurtenances, structures, conduits, light standards, vaults, width of roadways,
48 sidewalks, landscaping areas, building footprints, channelization and pavement
49 markings, etc. Include pipe invert elevations, top of castings (manholes, inlets,
50 etc.).
51

1 If the Contract calls for the Contracting Agency to do all surveying and staking, the
2 Contracting Agency will provide the elevations at the tolerances the Contracting Agency
3 requires for the Record Drawings.
4

5 When the Contract calls for the Contractor to do the surveying/staking, the applicable
6 tolerance limits include, but are not limited to the following:

	<u>Vertical</u>	<u>Horizontal</u>
As-built sanitary & storm invert and grate elevations	± 0.01 foot	± 0.01 foot
As-built monumentation	± 0.001 foot	± 0.001 foot
As-built waterlines, inverts, valves, hydrants	± 0.10 foot	± 0.10 foot
As-built ponds/swales/water features	± 0.10 foot	± 0.10 foot
As-built buildings (fin. Floor elev.)	± 0.01 foot	± 0.10 foot
As-built gas lines, power, TV, Tel, Com	± 0.10 foot	± 0.10 foot
As-built signs, signals, etc.	N/A	± 0.10 foot

7
8
9

Making Entries on the Record Drawings:

- 10 • Use erasable colored pencil (not ink) for all markings on the Record Drawings,
11 conforming to the following color code:
- 12 • Additions - Red
- 13 • Deletions - Green
- 14 • Comments - Blue
- 15 • Dimensions- Graphite
- 16 • Provide the applicable reference for all entries, such as the change order number,
17 the request for information (RFI) number, or the approved shop drawing number.
- 18 • Date all entries.
- 19 • Clearly identify all items in the entry with notes similar to those in the Contract
20 Drawings (such as pipe symbols, centerline elevations, materials, pipe joint
21 abbreviations, etc.).
22

23 The Contractor shall certify on the Record Drawings that said drawings are an accurate
24 depiction of built conditions, and in conformance with the requirements detailed above.
25 The Contractor shall submit final Record Drawings to the Contracting Agency.
26 Contracting Agency acceptance of the Record Drawings is one of the requirements for
27 achieving Physical Completion.
28

29 Payment will be made for the following bid item:
30

Record Drawings (Minimum Bid \$10,000)	Lump Sum
---	----------

31
32
33
34
35
36

Payment for this item will be made on a prorated monthly basis for work completed in accordance with this section up to 75% of the lump sum bid. The final 25% of the lump sum item will be paid upon submittal and approval of the completed Record Drawings set prepared in conformance with these Special Provisions.

1 A minimum bid amount has been entered in the Bid Proposal for this item. The Contractor
2 must bid at least that amount.

3
4 **1-06.6 Recycled Materials**
5 *(January 4, 2016 APWA GSP)*

6
7 Delete this section, including its subsections, and replace it with the following:

8
9 The Contractor shall make their best effort to utilize recycled materials in the construction
10 of the project. Approval of such material use shall be as detailed elsewhere in the
11 Standard Specifications.

12
13 Prior to Physical Completion the Contractor shall report the quantity of recycled materials
14 that were utilized in the construction of the project for each of the items listed in Section
15 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled
16 glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material
17 and aggregates from concrete returned to the supplier). The Contractor's report shall be
18 provided on DOT form 350-075 Recycled Materials Reporting.

19
20 **1-07.1 Laws to be Observed**
21 *(October 1, 2005 APWA GSP)*

22
23 Supplement this section with the following:

24
25 In cases of conflict between different safety regulations, the more stringent regulation
26 shall apply.

27
28 The Washington State Department of Labor and Industries shall be the sole and
29 paramount administrative agency responsible for the administration of the provisions of
30 the Washington Industrial Safety and Health Act of 1973 (WISHA).

31
32 The Contractor shall maintain at the project site office, or other well known place at the
33 project site, all articles necessary for providing first aid to the injured. The Contractor
34 shall establish, publish, and make known to all employees, procedures for ensuring
35 immediate removal to a hospital, or doctor's care, persons, including employees, who
36 may have been injured on the project site. Employees should not be permitted to work
37 on the project site before the Contractor has established and made known procedures
38 for removal of injured persons to a hospital or a doctor's care.

39
40 The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of
41 the Contractor's plant, appliances, and methods, and for any damage or injury resulting
42 from their failure, or improper maintenance, use, or operation. The Contractor shall be
43 solely and completely responsible for the conditions of the project site, including safety
44 for all persons and property in the performance of the work. This requirement shall apply
45 continuously, and not be limited to normal working hours. The required or implied duty of
46 the Engineer to conduct construction review of the Contractor's performance does not,
47 and shall not, be intended to include review and adequacy of the Contractor's safety
48 measures in, on, or near the project site.

49
50

1 **1-07.2 State Taxes**

2

3 Delete this section, including its sub-sections, in its entirety and replace it with the following:

4

5 **1-07.2 State Sales Tax**

6 *(June 27, 2011 APWA GSP)*

7

8 The Washington State Department of Revenue has issued special rules on the State
9 sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The
10 Contractor should contact the Washington State Department of Revenue for answers to
11 questions in this area. The Contracting Agency will not adjust its payment if the
12 Contractor bases a bid on a misunderstood tax liability.

13

14 The Contractor shall include all Contractor-paid taxes in the unit bid prices or other
15 contract amounts. In some cases, however, state retail sales tax will not be included.
16 Section 1-07.2(2) describes this exception.

17

18 The Contracting Agency will pay the retained percentage (or release the Contract Bond if
19 a FHWA-funded Project) only if the Contractor has obtained from the Washington State
20 Department of Revenue a certificate showing that all contract-related taxes have been
21 paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the
22 Contractor any amount the Contractor may owe the Washington State Department of
23 Revenue, whether the amount owed relates to this contract or not. Any amount so
24 deducted will be paid into the proper State fund.

25

26 **1-07.2(1) State Sales Tax — Rule 171**

27

28 WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets,
29 roads, etc., which are owned by a municipal corporation, or political subdivision of the
30 state, or by the United States, and which are used primarily for foot or vehicular traffic.
31 This includes storm or combined sewer systems within and included as a part of the
32 street or road drainage system and power lines when such are part of the roadway
33 lighting system. For work performed in such cases, the Contractor shall include
34 Washington State Retail Sales Taxes in the various unit bid item prices, or other contract
35 amounts, including those that the Contractor pays on the purchase of the materials,
36 equipment, or supplies used or consumed in doing the work.

37

38 **1-07.2(2) State Sales Tax — Rule 170**

39

40 WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or
41 existing buildings, or other structures, upon real property. This includes, but is not
42 limited to, the construction of streets, roads, highways, etc., owned by the state of
43 Washington; water mains and their appurtenances; sanitary sewers and sewage
44 disposal systems unless such sewers and disposal systems are within, and a part of, a
45 street or road drainage system; telephone, telegraph, electrical power distribution lines,
46 or other conduits or lines in or above streets or roads, unless such power lines become a
47 part of a street or road lighting system; and installing or attaching of any article of
48 tangible personal property in or to real property, whether or not such personal property
49 becomes a part of the realty by virtue of installation.

50

51 For work performed in such cases, the Contractor shall collect from the Contracting
52 Agency, retail sales tax on the full contract price. The Contracting Agency will

1 automatically add this sales tax to each payment to the Contractor. For this reason, the
2 Contractor shall not include the retail sales tax in the unit bid item prices, or in any other
3 contract amount subject to Rule 170, with the following exception.

4
5 Exception: The Contracting Agency will not add in sales tax for a payment the Contractor
6 or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or
7 consumable supplies not integrated into the project. Such sales taxes shall be included
8 in the unit bid item prices or in any other contract amount.

9 10 **1-07.2(3) Services**

11
12 The Contractor shall not collect retail sales tax from the Contracting Agency on any
13 contract wholly for professional or other services (as defined in Washington State
14 Department of Revenue Rules 138 and 244).

15 16 **Contractor's Responsibility for Work**

17 18 ***Repair of Damage***

19
20 Section 1-07.13(4) is revised to read:

21
22 (August 6, 2001)

23 The Contractor shall promptly repair all damage to either temporary or permanent
24 work as directed by the Engineer. For damage qualifying for relief under Sections 1-
25 07.13(1), 1-07.13(2) or 1-07.13(3), payment will be made in accordance with Section
26 1-04.4. Payment will be limited to repair of damaged work only. No payment will be
27 made for delay or disruption of work.

28 29 **Temporary Water Pollution/Erosion Control**

30 31 **Spill Prevention, Control and Countermeasures Plan**

32
33
34 Section 1-07.15(1) is supplemented with the following:

35
36 (OR June 20, 2016)

37 The Contractor shall implement the spill prevention measures identified in the SPCC
38 Plan before performing any of the following activities:

- 39
40
41
42
43
1. Placing materials or equipment in staging or storage areas
 2. Refueling, washing or maintaining equipment
 3. Stockpiling contaminated materials

44 Containment and cleanup efforts shall begin immediately and be completed as soon
45 as possible, taking precedence over normal work. Cleanup shall include proper
46 disposal of any spilled material and used cleanup materials. No emulsifiers or
47 dispersants are to be used in waters of the State without written approval from the
48 Department of Ecology. Concentrated waste or spilled chemicals shall be
49 transported off the site for disposal at a facility approved by the Department of
50 Ecology or local County Health Department.

51 52 **Disposal**

1 Spilled waste, chemicals or petroleum products shall be transported off site for
2 disposal at a facility approved by the Department of Ecology. The materials shall not
3 be discharged to any sanitary sewer without approval of the local sewer authority.
4

5 **Utilities and Similar Facilities**

6
7 Section 1-07.17 is supplemented with the following:
8

9 (April 2, 2007)

10 Locations and dimensions shown in the Plans for existing facilities are in accordance with
11 available information obtained without uncovering, measuring, or other verification.
12

13 Public and private utilities, or their Contractors, will furnish all work necessary to adjust,
14 relocate, replace, or construct their facilities unless otherwise provided for in the Plans or
15 these Special Provisions. Such adjustment, relocation, replacement, or construction will
16 be done during the prosecution of the work for this project. It is anticipated that utility
17 adjustment, relocation, replacement or construction within the project limits will be
18 completed as follows:
19

20 *** The Contractor will perform all excavation, backfill, and restoration for power work;
21 Mason PUD 3 will install conduit, pull wire through the conduits, set equipment and
22 set the meter.
23

24 CenturyLink will perform all work related to adjustment and relocation of CenturyLink
25 facilities with the exception of clearing and grubbing within the project limits.***
26

27 The Contractor shall attend a mandatory utility preconstruction meeting with the Engineer,
28 all affected Subcontractors, and all utility owners and their Contractors prior to beginning
29 onsite work.
30

31 The following addresses and telephone numbers of utility companies or their Contractors
32 that will be adjusting, relocating, replacing or constructing utilities within the project limits
33 are supplied for the Contractor's use:
34

35 *** **Power:**

36 Mason PUD 3
37 PO Box 2148
38 Shelton, WA 98584
39 *Contact:*
40 Justin Holzgrove (360) 426-8255 x5323
41 ***

42
43 *** **Telecom:**

44 CenturyLink
45 *Contact:*
46 Royce Klein (360) 478-5930
47 ***
48

1 **1-07.18 Public Liability and Property Damage Insurance**

2

3 Delete this section in its entirety, and replace it with the following:

4

5 **1-07.18 Insurance**

6 *(January 4, 2016 APWA GSP)*

7

8 **1-07.18(1) General Requirements**

- 9 A. The Contractor shall procure and maintain the insurance described in all subsections of
10 section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best
11 rating of not less than A-: VII and licensed to do business in the State of Washington.
12 The Contracting Agency reserves the right to approve or reject the insurance provided,
13 based on the insurer's financial condition.
- 14
- 15 B. The Contractor shall keep this insurance in force without interruption from the
16 commencement of the Contractor's Work through the term of the Contract and for thirty
17 (30) days after the Physical Completion date, unless otherwise indicated below.
- 18
- 19 C. If any insurance policy is written on a claims made form, its retroactive date, and that of
20 all subsequent renewals, shall be no later than the effective date of this Contract. The
21 policy shall state that coverage is claims made, and state the retroactive date. Claims-
22 made form coverage shall be maintained by the Contractor for a minimum of 36 months
23 following the Completion Date or earlier termination of this Contract, and the Contractor
24 shall annually provide the Contracting Agency with proof of renewal. If renewal of the
25 claims made form of coverage becomes unavailable, or economically prohibitive, the
26 Contractor shall purchase an extended reporting period ("tail") or execute another form of
27 guarantee acceptable to the Contracting Agency to assure financial responsibility for
28 liability for services performed.
- 29
- 30 D. The Contractor's Automobile Liability, Commercial General Liability and Excess or
31 Umbrella Liability insurance policies shall be primary and non-contributory insurance as
32 respects the Contracting Agency's insurance, self-insurance, or self-insured pool
33 coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the
34 Contracting Agency shall be excess of the Contractor's insurance and shall not contribute
35 with it.
- 36
- 37 E. The Contractor shall provide the Contracting Agency and all additional insureds with
38 written notice of any policy cancellation, within two business days of their receipt of such
39 notice.
- 40
- 41 F. The Contractor shall not begin work under the Contract until the required insurance has
42 been obtained and approved by the Contracting Agency
- 43
- 44 G. Failure on the part of the Contractor to maintain the insurance as required shall
45 constitute a material breach of contract, upon which the Contracting Agency may, after
46 giving five business days' notice to the Contractor to correct the breach, immediately
47 terminate the Contract or, at its discretion, procure or renew such insurance and pay any
48 and all premiums in connection therewith, with any sums so expended to be repaid to the
49 Contracting Agency on demand, or at the sole discretion of the Contracting Agency,
50 offset against funds due the Contractor from the Contracting Agency.
- 51

1 H. All costs for insurance shall be incidental to and included in the unit or lump sum prices
2 of the Contract and no additional payment will be made.
3

4 **1-07.18(2) Additional Insured**

5 All insurance policies, with the exception of Workers Compensation, and of Professional
6 Liability and Builder's Risk (if required by this Contract) shall name the following listed
7 entities as additional insured(s) using the forms or endorsements required herein:

- 8 ▪ the Contracting Agency and its officers, elected officials, employees, agents, and
9 volunteers
- 10 ▪ SCJ Alliance and its officers, elected officials, employees, agents, and volunteers

11 The above-listed entities shall be additional insured(s) for the full available limits of liability
12 maintained by the Contractor, irrespective of whether such limits maintained by the
13 Contractor are greater than those required by this Contract, and irrespective of whether the
14 Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits
15 lower than those maintained by the Contractor.
16

17 For Commercial General Liability insurance coverage, the required additional insured
18 endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing
19 operations and CG 20 37 10 01 for completed operations.
20

21 **1-07.18(3) Subcontractors**

22 The Contractor shall cause each Subcontractor of every tier to provide insurance coverage
23 that complies with all applicable requirements of the Contractor-provided insurance as set
24 forth herein, except the Contractor shall have sole responsibility for determining the limits of
25 coverage required to be obtained by Subcontractors.
26

27 The Contractor shall ensure that all Subcontractors of every tier add all entities listed in
28 1-07.18(2) as additional insureds, and provide proof of such on the policies as required by
29 that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20
30 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.
31

32 Upon request by the Contracting Agency, the Contractor shall forward to the Contracting
33 Agency evidence of insurance and copies of the additional insured endorsements of each
34 Subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.
35

36 **1-07.18(4) Verification of Coverage**

37 The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and
38 endorsements for each policy of insurance meeting the requirements set forth herein when
39 the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to
40 demand such verification of coverage with these insurance requirements or failure of
41 Contracting Agency to identify a deficiency from the insurance documentation provided shall
42 not be construed as a waiver of Contractor's obligation to maintain such insurance.
43

44 Verification of coverage shall include:

- 45 1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
- 46 2. Copies of all endorsements naming Contracting Agency and all other entities listed in
47 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may
48 submit a copy of any blanket additional insured clause from its policies instead of a
49 separate endorsement.
- 50 3. Any other amendatory endorsements to show the coverage required herein.

1 4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy
2 these requirements – actual endorsements must be submitted.
3

4 Upon request by the Contracting Agency, the Contractor shall forward to the Contracting
5 Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is
6 required on this Project, a full and certified copy of that policy is required when the
7 Contractor delivers the signed Contract for the work.
8

9 **1-07.18(5) Coverages and Limits**

10 The insurance shall provide the minimum coverages and limits set forth below. Contractor's
11 maintenance of insurance, its scope of coverage, and limits as required herein shall not be
12 construed to limit the liability of the Contractor to the coverage provided by such insurance,
13 or otherwise limit the Contracting Agency's recourse to any remedy available at law or in
14 equity.
15

16 All deductibles and self-insured retentions must be disclosed and are subject to approval by
17 the Contracting Agency. The cost of any claim payments falling within the deductible or self-
18 insured retention shall be the responsibility of the Contractor. In the event an additional
19 insured incurs a liability subject to any policy's deductibles or self-insured retention, said
20 deductibles or self-insured retention shall be the responsibility of the Contractor.
21

22 **1-07.18(5)A Commercial General Liability**

23 Commercial General Liability insurance shall be written on coverage forms at least as broad
24 as ISO occurrence form CG 00 01, including but not limited to liability arising from premises,
25 operations, stop gap liability, independent contractors, products-completed operations,
26 personal and advertising injury, and liability assumed under an insured contract. There shall
27 be no exclusion for liability arising from explosion, collapse or underground property
28 damage.
29

30 The Commercial General Liability insurance shall be endorsed to provide a per project
31 general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.
32

33 Contractor shall maintain Commercial General Liability Insurance arising out of the
34 Contractor's completed operations for at least three years following Substantial Completion
35 of the Work.
36

37 Such policy must provide the following minimum limits:

38	\$1,000,000	Each Occurrence
39	\$2,000,000	General Aggregate
40	\$2,000,000	Products & Completed Operations Aggregate
41	\$1,000,000	Personal & Advertising Injury each offence
42	\$1,000,000	Stop Gap / Employers' Liability each accident

43

44 **1-07.18(5)B Automobile Liability**

45 Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be
46 written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the
47 transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48
48 endorsements.
49

50 Such policy must provide the following minimum limit:

51	\$1,000,000	Combined single limit each accident
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1-07.18(5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

Public Convenience and Safety

Construction Under Traffic

(*****)

Work Zone Clear Zone

The WZCZ applies only to temporary roadside objects introduced by the Contractor's operations and does not apply to preexisting conditions or permanent Work. Those work operations that are actively in progress shall be in accordance with adopted and approved Traffic Control Plans, and other contract requirements.

During nonworking hours equipment or materials shall not be within the right of way unless they are protected by permanent guardrail or barrier.

During actual hours of work, unless protected as described above, only materials absolutely necessary to construction shall be within the WZCZ and only construction vehicles absolutely necessary to construction shall be allowed within the WZCZ or allowed to stop or park on the shoulder of the roadway.

The Contractor's nonessential vehicles and employees private vehicles shall not be permitted to park within the WZCZ at any time unless protected as described above.

Deviation from the above requirements shall not occur unless the Contractor has requested the deviation in writing and the Project Engineer has provided written approval.

Minimum WZCZ distances are measured from the edge of traveled way and will be determined as follows:

Posted Speed	Distance From Traveled Way (Feet)
35 mph or less	10 *
40 mph	15
45 to 55 mph	20
60 mph or greater	30

* or 2-feet beyond the outside edge of sidewalk

Minimum Work Zone Clear Zone Distance

(*****)

Lane restrictions shall be held to a minimum time and length needed for each operation. If the Engineer determines that the lane restrictions are causing congestion, the Contractor shall open all lanes to traffic until the congestion is eliminated.

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Contractor's vehicles of 10,000 GVW or greater shall not exit or enter a lane open to public traffic except as follows:

Egress and ingress shall only occur during the hours of allowable lane closures, and

- a. For exiting an open lane of traffic, by decelerating in a lane that is closed during the allowable hours for lane closures.
- b. For entering an open lane of traffic, by accelerating in a closed lane during the allowable hours for lane closures.

Traffic control vehicles are excluded from the gross vehicle weight requirement. If placing construction signs will restrict traveled lanes, then the work will be permitted during the hours stated below.

Hours are shown in 24-hour format.

Lane, Ramp, and Roadway Closures

Lane restrictions will be permitted during the hours listed below:

State Route 3
Flagger Controlled One-Way Traffic

Sun	21:00	to	Mon	05:00
Mon	20:00	to	Tues	05:00
Tues	20:00	to	Wed	05:00
Wed	20:00	to	Thurs	05:00
Thurs	20:00	to	Fri	05:00
Fri	21:00	to	Sat	07:00
Sat	21:00	to	Sun	08:00

Log Yard Road (west leg)
Flagger Controlled One-Way Traffic

Sun	21:00	to	Mon	05:00
Mon	20:00	to	Tues	05:00
Tues	20:00	to	Wed	05:00
Wed	20:00	to	Thurs	05:00
Thurs	20:00	to	Fri	05:00
Fri	21:00	to	Sat	07:00
Sat	21:00	to	Sun	08:00

Lane closures are not allowed on any of the following:

- 1. A holiday,
- 2. A holiday weekend; holidays that occur on Friday, Saturday, Sunday or Monday are considered a holiday weekend. A holiday weekend includes Saturday, Sunday, and the holiday.
- 3. After 12:00 on the day prior to a holiday or holiday weekend, and
- 4. Before 12:00 on the day after the holiday or holiday weekend.

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If July 4th occurs on a Tuesday, the prior Monday and Friday are considered to be part of a holiday weekend. If July 4th occurs on a Thursday, the following Friday and Monday are considered to be part of a holiday weekend.

Should high volume hours differ from those specified, as determined by the Engineer, the Contractor shall adjust the hours of work accordingly. Exceptions to these restrictions may be considered by the Engineer on a case by case basis following a written request by the Contractor.

Special events that generate increased traffic volumes through the work area may occur during the life of this project. Lane restrictions are not allowed during days of special events, unless approved by the Engineer.

There shall be no delay to medical, fire, police, or other emergency vehicles with flashing lights or sirens. The Contractor shall alert all flaggers and personnel of this requirement.

1-07.24 Rights of Way
(July 23, 2015 APWA GSP)

Delete this section and replace it with the following:

Street Right of Way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor's construction activities shall be confined within these limits, unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

1 Each property owner shall be given 48 hours notice prior to entry by the Contractor. This
2 includes entry onto easements and private property where private improvements must
3 be adjusted.
4

5 The Contractor shall be responsible for providing, without expense or liability to the
6 Contracting Agency, any additional land and access thereto that the Contractor may
7 desire for temporary construction facilities, storage of materials, or other Contractor
8 needs. However, before using any private property, whether adjoining the work or not,
9 the Contractor shall file with the Engineer a written permission of the private property
10 owner, and, upon vacating the premises, a written release from the property owner of
11 each property disturbed or otherwise interfered with by reasons of construction pursued
12 under this contract. The statement shall be signed by the private property owner, or
13 proper authority acting for the owner of the private property affected, stating that
14 permission has been granted to use the property and all necessary permits have been
15 obtained or, in the case of a release, that the restoration of the property has been
16 satisfactorily accomplished. The statement shall include the parcel number, address,
17 and date of signature. Written releases must be filed with the Engineer before the
18 Completion Date will be established.
19

20 **1-08 PROSECUTION AND PROGRESS**

21
22 Add the following new section:
23

24 **1-08.0 Preliminary Matters** 25 (May 25, 2006 APWA GSP) 26

27 Add the following new section:
28

29 **1-08.0(1) Preconstruction Conference** 30 (October 10, 2008 APWA GSP) 31

32 Prior to the Contractor beginning the work, a preconstruction conference will be held
33 between the Contractor, the Engineer and such other interested parties as may be
34 invited. The purpose of the preconstruction conference will be:

- 35 1. To review the initial progress schedule;
- 36 2. To establish a working understanding among the various parties associated or
37 affected by the work;
- 38 3. To establish and review procedures for progress payment, notifications, approvals,
39 submittals, etc.;
- 40 4. To establish normal working hours for the work;
- 41 5. To review safety standards and traffic control; and
- 42 6. To discuss such other related items as may be pertinent to the work.
43

44 The Contractor shall prepare and submit at the preconstruction conference the following:

- 45 1. A breakdown of all lump sum items;
- 46 2. A preliminary schedule of working drawing submittals; and
- 47 3. A list of material sources for approval if applicable.
48

1 **1-08.1 Subcontracting**
2 *(November 30, 2018 APWA GSP, Option B)*

3
4 Delete the eighth paragraph.

5
6 **1-08.3(2)B Type B Progress Schedule**
7 *(March 13, 2012 APWA GSP)*

8
9 Revise the first paragraph to read:

10
11 The Contractor shall submit a preliminary Type B Progress Schedule at or prior to the
12 preconstruction conference. The preliminary Type B Progress Schedule shall comply
13 with all of these requirements and the requirements of Section 1-08.3(1), except that it
14 may be limited to only those activities occurring within the first 60-working days of the
15 project.

16
17 Revise the first sentence of the second paragraph to read:

18
19 The Contractor shall submit 5 copies of a Type B Progress Schedule depicting the entire
20 project no later than 21-calendar days after the preconstruction conference.

21
22 **1-08.4 Prosecution of Work**

23
24 Delete this section and replace it with the following:

25
26 **1-08.4 Notice to Proceed and Prosecution of Work**
27 *(July 23, 2015 APWA GSP)*

28
29 Notice to Proceed will be given after the contract has been executed and the contract
30 bond and evidence of insurance have been approved and filed by the Contracting
31 Agency. The Contractor shall not commence with the work until the Notice to Proceed
32 has been given by the Engineer. The Contractor shall commence construction activities
33 on the project site within ten days of the Notice to Proceed Date, unless otherwise
34 approved in writing. The Contractor shall diligently pursue the work to the physical
35 completion date within the time specified in the contract. Voluntary shutdown or slowing
36 of operations by the Contractor shall not relieve the Contractor of the responsibility to
37 complete the work within the time(s) specified in the contract.

38
39 When shown in the Plans, the first order of work shall be the installation of high visibility
40 fencing to delineate all areas for protection or restoration, as described in the Contract.
41 Installation of high visibility fencing adjacent to the roadway shall occur after the
42 placement of all necessary signs and traffic control devices in accordance with 1-10.1(2).
43 Upon construction of the fencing, the Contractor shall request the Engineer to inspect the
44 fence. No other work shall be performed on the site until the Contracting Agency has
45 accepted the installation of high visibility fencing, as described in the Contract.

46
47 **Time for Completion**

48
49 Section 1-08.5 is supplemented with the following:

50
51 *(March 13, 1995)*

52 This project shall be physically completed within *** 90 *** working days.

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Suspension of Work

Section 1-08.6 is supplemented with the following:

(OR August 28, 2012)

Contract time may be suspended for the curing period of in-place pavement material (HMA, fogseal and/or Portland Cement Concrete) prior to Type D Methyl Methacrylate pavement marking installation; see Section 8-22.3(2).

If the approved Progress Schedule indicates any portion of the curing period of the in-place material is shown to be a critical path activity, the Contractor may be granted a Suspension at the point the cure becomes critical.

Charging of contract time will resume once the in-place material has achieved the required cure as specified in Section 8-22.3(2).

1-08.9 Liquidated Damages

(August 14, 2013 APWA GSP)

Revise the fourth paragraph to read:

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine that the work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, the formula for liquidated damages shown above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

Measurement of Quantities

This section is supplemented with the following:

(*****)

There is no measurement of quantities for this project. Measurement of quantities will only apply during construction when any changes may occur.

Schedule of Values

The Schedule of Values shall be used as the basis for reviewing and determine each monthly progress payment estimate and as such shall be subject to periodic review by the Contracting Agency to assure that the schedule of values reasonably represents, in the opinion of the Engineer, the actual value of the individual items of work to be performed, or materials delivered to the site.

1 **1-09.2(1) General Requirements for Weighing Equipment**

2 *(July 23, 2015 APWA GSP, Option 2)*

3

4 Revise item 4 of the fifth paragraph to read:

5

6 4. Test results and scale weight records for each day's hauling operations are provided
7 to the Engineer daily. Reporting shall utilize WSDOT form 422-027, Scaleman's
8 Daily Report, unless the printed ticket contains the same information that is on the
9 Scaleman's Daily Report Form. The scale operator must provide AM and/or PM tare
10 weights for each truck on the printed ticket.

11

12 **1-09.6 Force Account**

13 *(October 10, 2008 APWA GSP)*

14

15 Supplement this section with the following:

16

17 The Contracting Agency has estimated and included in the Proposal, dollar amounts for
18 all items to be paid per force account, only to provide a common proposal for Bidders. All
19 such dollar amounts are to become a part of Contractor's total bid. However, the
20 Contracting Agency does not warrant expressly or by implication, that the actual amount
21 of work will correspond with those estimates. Payment will be made on the basis of the
22 amount of work actually authorized by Engineer.

23

24 **1-09.9 Payments**

25 *(March 13, 2012 APWA GSP)*

26

27 Supplement this section with the following:

28

29 Lump sum item breakdowns are not required when the bid price for the lump sum item is
30 less than \$20,000.

31

32 **1-09.9 Payments**

33 *(March 13, 2012 APWA GSP)*

34

35 Delete the first four paragraphs and replace them with the following:

36

37 The basis of payment will be the actual quantities of Work performed according to the
38 Contract and as specified for payment.

39

40 The Contractor shall submit a breakdown of the cost of lump sum bid items at the
41 Preconstruction Conference, to enable the Project Engineer to determine the Work
42 performed on a monthly basis. A breakdown is not required for lump sum items that
43 include a basis for incremental payments as part of the respective Specification. Absent
44 a lump sum breakdown, the Project Engineer will make a determination based on
45 information available. The Project Engineer's determination of the cost of work shall be
46 final.

47

48 Progress payments for completed work and material on hand will be based upon
49 progress estimates prepared by the Engineer. A progress estimate cutoff date will be
50 established at the preconstruction conference.

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The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payments. The progress estimates are subject to change at any time prior to the calculation of the final payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor’s lump sum breakdown for that item, or absent such a breakdown, based on the Engineer’s determination.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
2. The amount of progress payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

1-09.11(3) Time Limitation and Jurisdiction
(November 30, 2018 APWA GSP)

Revise this section to read:

For the convenience of the parties to the Contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that any such claims or causes of action shall be brought only in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction. The parties understand and agree that the Contractor’s failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to any records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

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1-09.13(3) Claims \$250,000 or Less

(October 1, 2005 APWA GSP)

Delete this section and replace it with the following:

The Contractor and the Contracting Agency mutually agree that those claims that total \$250,000 or less, submitted in accordance with Section 1-09.11 and not resolved by nonbinding ADR processes, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

1-09.13(3)A Administration of Arbitration
(November 30, 2018 APWA GSP)

Revise the third paragraph to read:

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

Division 2
Earthwork

Roadway Excavation and Embankment

Embankment Construction

Compacting Earth Embankments

Section 2-03.3(14)C is supplemented with the following:

(March 13, 1995)

All embankments, except waste embankments, shall be compacted using Method A.

Division 5
Surface Treatments and Pavements

Hot Mix Asphalt

Materials

Mix Design – Obtaining Project Approval

Section 5-04.2(2) is supplemented with the following:

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(January 3, 2011)

ESAL's

The number of ESAL's for the design and acceptance of the HMA shall be ***
1.9 *** million.

Weather Limitations

The first sentence of Section 5-04.3(1) is revised to read:

(August 3, 2009)

HMA for wearing course shall not be placed on any travelled way from *** Oct. 1st
*** and through March 31st of the following year without written approval from the
Engineer.

Material Transfer Device or Material Transfer Vehicle

Section 5-04.3(3)D including title is revised to read:

(August 1, 2011)

Material Transfer Vehicle

Direct transfer of HMA from the hauling equipment to the paving machine will
not be allowed in the top 0.30-feet of the pavement section of hot mix asphalt
(HMA) used in traffic lanes with a depth of 0.08-feet or greater. A material
transfer vehicle (MTV) shall be used to deliver the HMA from the hauling
equipment to the paving machine. HMA placed in irregularly shaped and minor
areas such as road approaches, tapers, and turn lanes are excluded from this
requirement.

The MTV shall mix the HMA after delivery by the hauling equipment and prior to
lay down by the paving machine. Mixing of the HMA shall be sufficient to obtain
a uniform temperature throughout the mixture

HMA Compaction Acceptance

In Section 5-04.3(10)A, the second sentence of the third paragraph is revised to read
as follows:

(*****)

An exception shall be that pneumatic tired rollers shall be used for compaction
of the wearing course between September 1st of any year and March 31st of the
following year.

Cement Concrete Pavement

Section 5-05.1 is supplemented with the following:

(August 6, 2012)

This Work consists of furnishing and placing pigmented, textured, or textured and
pigmented cement concrete pavement at the locations and depth as shown in the Plans.

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Materials

Section 5-05.2 is supplemented with the following:

(August 6, 2012)

Pigment color for cement concrete pavement shall be one chosen from the manufactures and colors listed below:

*** Increte Systems "Dark Gray" ***

The pigment shall be incorporated in accordance with the manufacturer's recommendations.

Construction Requirements

Section 5-05.3 is supplemented with the following:

(August 6, 2012)

Pigmented Cement Concrete

Curing shall be in accordance with Section 5-05.3(13) and be applied to the surface in accordance with the manufacturer's recommendations. If liquid membrane-forming concrete curing compound is used it shall meet the requirements of ASTM C 309 Type 1-D.

The Contractor shall provide a 2 foot by 2 foot sample panel, that has been cured a minimum seven days, showing the color of cement concrete to the Engineer for acceptance before placing any pigmented cement concrete pavement.

(August 6, 2012)

Textured Cement Concrete

Textured cement concrete pavement pattern shall be one chosen from the manufactures and patterns listed below:

*** Increte Systems, Inc. "Ashlar Slate" ***

A mat or stamp shall be used to imprint the pattern into the concrete surface.

Curing shall be in accordance with Section 5-05.3(13) and be applied to the surface in accordance with the manufacturer's recommendations. If liquid membrane-forming concrete curing compound is used it shall meet the requirements of ASTM C 309 Type 1-D.

Concrete Mix Design for Paving

Section 5-05.3(1) is supplemented with the following:

(August 6, 2012)

Aggregate for Textured Cement Concrete Pavement

Coarse aggregate for Textured Cement Concrete Pavement shall conform to Section 9-03.1(4), AASHTO grading No. 7. An alternate for combined gradation for Textured

1 Cement Concrete Pavement conforming to Section 9-03.1(5) may be proposed, that
2 has a nominal maximum aggregate size of ½ inch sieve.

3
4 **(August 7, 2017)**
5 **JUST IN TIME TRAINING**

6 **Description**

7 Just In Time Training (JITT) is a formal class for the joint training of Contractor and Contracting
8 Agency employees that will be associated with the construction or rehabilitation of Cement
9 Concrete Pavement.

10

11 **Construction Requirements**

12 ***Training***

13 The Contractor shall provide a JITT instructor who is experienced with the specified
14 pavement construction methods, materials, and tests. The instructor shall not be an
15 employee of the Contractor or the Contracting Agency. JITT shall be at a facility provided
16 by the Contractor unless otherwise agreed to by the Engineer.

17

18 The following personnel are required to attend the JITT:

19

- 20 1. Representing the Contractor: The Superintendent, foremen and key
21 construction personnel associated with the work.
22 2. Representing the Contracting Agency: Up to ***\$\$1\$\$*** Contracting Agency
23 staff selected by the Engineer.

24

25 JITT shall meet the following requirements:

26

- 27 1. At least 4 hours long or a length agreed to by the Engineer.
28 2. Cover all aspects of work methods, equipment and materials the Contractor is
29 proposing to use.
30 3. Conducted within 3 miles of the job site or at a mutually agreed to location.
31 4. Completed before the start of paving.
32 5. Conducted during normal working hours.
33 6. At the Contractors option, JITT may be an extension of a prepaving conference.

34

35 ***Submittals***

36 A minimum of 5 calendar days before JITT the Contractor shall submit to the Engineer
37 the instructor's name and qualifications, the JITT facility's location, and 1 copy each of
38 any course, handout, and presentation materials.

39

40 **Payment**

41 Payment will be made for each of the following items that are included in the Proposal:

42

43 "Just In Time Training", lump sum.

44

45 The lump sum Contract payment shall be full compensation for all costs incurred by the
46 Contractor in providing "Just In Time Training".

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Division 8
Miscellaneous Construction

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Erosion Control and Water Pollution Control

Construction Requirements

Submittals

Section 8-01.3(1)A is supplemented with the following:

(OR February 1, 2011)

A temporary erosion and sediment control (TESC) narrative is included in the Appendix of these provisions and is made part of the contract.

Erosion and Sediment Control (ESC) Lead

In Section 8-01.3(1)B, the second paragraph is supplemented with the following:

(OR February 7, 2019)

5. Updating and maintaining a TESC file on site that includes at a minimum:
 - a. Erosion and Sediment Control Inspection Forms.
 - b. Temporary Erosion and Sediment Control (TESC) Plan and narrative.
 - c. Other applicable permits.
 - d. Contracting Agency-supplied stormwater monitoring reports, if applicable.
 - e. National Pollutant Discharge Elimination System construction permit (Notice of Intent).
 - f. Contracting Agency-supplied NPDES permit coverage letter.

Upon request, the file shall be provided to the Engineer for review.

Temporary Mulching

Section 8-01.3(2)D is supplemented with the following:

Roadside Restoration

Description

Section 8-02.1 is supplemented with the following:

(August 4, 2014)

This work shall consist of removing and disposing of buried man-made debris that may be encountered during soil amendment incorporation or excavation for irrigation systems.

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Topsoil

Topsoil Type A

Section 9-14.1(1) is supplemented with the following:

(August 7, 2017)

Topsoil Type A shall meet the following requirements:

1. Cation exchange capacity (CEC) of Topsoil Type A shall be a minimum of 5 milliequivalents CEC/100 g dry soil (U.S. EPA Method 9081).
2. Organic content greater than 8-percent but less than 15-percent as measured on a dry weight basis using AASHTO T 267 Determination of Organic Content in Soils by Loss on Ignition.

Topsoil Type A shall be 60-percent to 70-percent *** 60 %*** Loam and 40-percent to 30-percent *** 40% Fine *** Compost by volume. *** 60% *** Loam shall be as defined by the US Department of Agriculture Soil Classification System.

The Contractor shall submit a Particle Size Analysis as a Type 1 Working Drawing from an independent accredited soils testing laboratory indicating the Material source and compliance with all Topsoil Type A specifications. The laboratory analysis shall be with a sample size of no less than 2 pounds.

The *** 40% Fine *** Compost shall conform to the requirements of Section 9-14.4(8).

Construction Requirements

Topsoil

Topsoil Type A

Section 8-02.3(4)A is supplemented with the following:

(*****)

Topsoil Type A shall be placed to a non-compacted depth as shown in the plans. The topsoil shall be thoroughly blended prior to placement.

The Contractor shall submit a Type 1 Working Drawing consisting of independent test results from an accredited laboratory demonstrating the Topsoil Type A meets the requirements of Section 9-14.1(1). The Type 1 Working Drawing shall also include the Request for Approval of Material in accordance with Section 1-06.1(2).

1 **Illumination, Traffic Signal Systems, Intelligent Transportation Systems, and**
2 **Electrical**

3
4 **Materials**

5
6 Section 8-20.2 is supplemented with the following:
7

8 ***Conduit, Innerduct, and Outerduct***
9

10 **Foam Conduit Sealant**

11 Section 9-29.1(11) is supplemented with the following:
12

13 (January 7, 2019)

14 The following products are accepted for use as foam conduit sealant:
15

- 16 • CRC Minimal Expansion Foam (No. 14077)
 - 17 • Polywater FST Foam Duct Sealant
 - 18 • Superior Industries Foam Seal
 - 19 • Todol Duo Fill 400
- 20

21 **Standard Duty Cable Vaults and Pull Boxes**

22 Section 9-29.2(2)A is supplemented with the following:
23

24 (August 1, 2016)

25 Both the slip-resistant lid and slip-resistant frame shall be treated with Mebac#1
26 as manufactured by IKG industries, or SlipNOT Grade 3-coarse as
27 manufactured by W.S. Molnar Co. Where the exposed portion of the frame is ½
28 inch wide or less the slip-resistant treatment may be omitted on that portion of
29 the frame. The slip-resistant lid shall be identified with permanent marking on
30 the underside indicating the type of surface treatment ("M1" for Mebac#1; or "S3"
31 for SlipNOT Grade 3-coarse) and the year manufactured. The permanent
32 marking shall be 1/8 inch line thickness formed with a mild steel weld bead.
33

34 **(*****)**

35 ***RRFB System and Signing***

36
37 **Rectangular Rapid Flashing Beacons System**

38 The Contractor shall furnish and install one rectangular rapid flashing beacon system
39 where shown in the Plans.
40

41 The system shall be purchased as a packaged unit.
42

43 Permanent signs attached to the system shall meet the requirements of Section 8-
44 21.
45

46 ***Pedestrian Push Buttons***

47 Section 9-29.19 is deleted and replaced with the following:
48

48 **(*****)**

49 Where specified in the Contract, type PPB-M and type PPB-W pedestrian pushbuttons of
50 tamper-resistant construction shall be furnished and installed. They shall consist of a 2

1 ¼ -inch diameter chrome plated mushroom plunger and a single momentary contact
2 switch in a cast metal housing assembled with the push button sign shown in the plans.
3 The switch shall have a snap action contacts, actuated by a three bladed beryllium copper
4 spring, and shall be rated 10 amperes, 125 volts. The assembly shall be installed such
5 that it is effectively bonded to any electrically conductive materials and to the supply
6 system grounded equipment.

7
8 The pedestrian push-button assembly shall be constructed and mounted as detailed in
9 the Contract.

10
11
12 ***Light And Signal Standards***

13 Section 9-29.6 is supplemented with the following:

14
15 **(January 7, 2019)**

16 **Light Standards with Type 1 Luminaire Arms**

17 Lighting standards shall be fabricated in conformance with the methods and
18 materials specified on the pre-approved Plans listed below, provided the following
19 requirements have been satisfied:

20
21 (a) Light source to pole base distance (H1) shall be as noted in the Plans.
22 Verification of H1 distances by the Engineer, prior to fabrication, is not
23 required. Fabrication tolerance shall be ± 6 inches.

24
25 (b) All other requirements of the Special Provisions have been satisfied.

<u>Pre-Approved Plan</u>	<u>Fabricator</u>	<u>Mounting Hgt.</u>
Drawing No. DB01164 Rev. B Sheets 1, 2, 3, 4 & 5 of 5	Valmont Ind. Inc.	30', 35', 40' & 50'
Drawing No. WA15LT3721 Rev. A Sheet 1 and 2 of 2	Ameron Pole Prod. Div.	20',25',30',35',40', 45' & 50'

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36 ***Flashing Beacon Control***

37 Section 9-29.15 is supplemented with the following:

38
39 **(*****)**

40 **Rapid Flashing Beacons**

41 Rapid Flashing Beacon (RFB) indications shall comply with the dimensional,
42 operational, and flash pattern requirements of Federal Highway Administration
43 (FHWA) Interim Approval 21 (IA-21, Conditions 4, 5, and 6, excluding Condition 5f;
44 https://mutcd.fhwa.dot.gov/resources/interim_approval/ia21/index.htm). RFB
45 systems shall be capable of providing, at a minimum, the following two-channel
46 flashing patterns:

47
48 1. NEMA Standard 50-50:

- 49
50
 - Channel one is ON and channel two is OFF for 0.5 seconds.
 - Channel one is OFF and channel two is ON for 0.5 seconds.

51 (Cycle repeats; the total flashing pattern cycle length is 1.00 second.)
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2. RFB “WW+S” Pattern (IA-21 Condition 5b):

- Channel one is ON and channel two is OFF for 0.05 seconds.
 - Both channels are OFF for 0.05 seconds.
 - Channel one is OFF and channel two is ON for 0.05 seconds.
 - Both channels are OFF for 0.05 seconds.
 - Channel one is ON and channel two is OFF for 0.05 seconds.
 - Both channels are OFF for 0.05 seconds.
 - Channel one is OFF and channel two is ON for 0.05 seconds.
 - Both channels are OFF for 0.05 seconds.
 - Both channels are ON for 0.05 seconds.
 - Both channels are OFF for 0.05 seconds.
 - Both channels are ON for 0.05 seconds.
 - Both channels are OFF for 0.25 seconds.
- (Cycle repeats; the total flashing pattern cycle length is 0.80 seconds.)

The flashing pattern shall be user-selectable in the field.

RFB system pushbuttons shall not include tactile arrows, speech messages, or vibrotactile indications. RFB system pushbuttons shall use a 9” x 12” R10-25 sign. The R10-25 sign may include integral yellow warning lights.

Equipment List And Drawings

Section 8-20.2(1) is supplemented with the following:

(March 13, 1995)

Pole base to light source distances (H1) for lighting standards with pre-approved plans shall be as noted in the Plans.

Pole base to light source distances (H1) for lighting standards without pre-approved plans will be furnished by the Engineer as part of the final approved shop drawings, prior to fabrication.

Construction Requirements

Section 8-20.3 is supplemented with the following:

(*****)

RRFB System and Signing

The Rectangular Rapid Flashing Beacon System (RRFB) shall be fully compliant with FHWA Interim Approval for Optional Use of Rectangular Rapid Flashing Beacons (IA-11), which can be found at:

http://mutcd.fhwa.dot.gov/resources/interim_approval/ia11/ia11_rrfb_iapmemo.pdf

The systems shall also be compliant with the most current MUTCD guidelines and standards along with the following requirements:

Western Systems

1 Shawna Storms
2 1122 Industry Street
3 Everett, WA 98203
4 Phone: 425-438-1133

5
6 TAPCO Traffic & Parking Control Co., Inc.
7 Amanda Dobbs
8 TAPCO Traffic & Parking Control Co., Inc
9 5100 W Brown Deer Road
10 Brown Deer, WI 53223
11 Phone: 1.262.814.7000
12 Toll Free Phone 800.236.0112
13 Toll Free Fax 800.444.0331

14
15 Electronicstechnics Corporation (ELTEC)
16 Melinda Miller
17 Cascade Signal Corporation
18 PMB #172, 17719 Pacific Ave. South
19 Spanaway, WA. 98387-8334
20 (360) 400-0802
21 (360) 400-0439
22

23 **Rapid Flashing Bar**

24 **Beacons**

25 Beacons shall have LED bulbs and be highly visible from a minimum of 1,000
26 feet in advance of the crosswalk during the day. LED's shall be rated for a
27 minimum of 15 years with a minimum run time of 100,000 hours. They shall be
28 recessed in the flash bar with an additional polycarbonate shield for vandal
29 resistance. Light configuration shall provide lights on both ends of the bar for
30 notification to pedestrians entering the crosswalk from either side.
31

32 **Flash Bar Housing**

33 The Flash bar housing shall be constructed from a single piece of a minimum
34 of 1/8th inch thick structural aluminum, providing durability and corrosion
35 resistance. The flash bar shall allow directional rotation – enabling lights to be
36 aimed toward oncoming traffic. There shall be no exposed screws.
37

38 **Beacon Control**

39 The flash pattern, activation duration and/or activation schedule shall be
40 determined by the system controller. The system controller shall automatically
41 adjust beacon brightness as outside light levels change between day and
42 night, being brighter during the day and dimming at night. The level of
43 brightness during different conditions shall be programmable through the
44 controller.
45

46 **Controller**

47 **Enclosure**

48 The controller unit shall be housed in a NEMA 3R or greater rated, pole
49 mounted, aluminum cabinet with stainless steel hinge. The controller cabinet
50 shall be 19"H x 10"W x 6"D plus or minus 1 inch for all dimensions.
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Power Options

The controller unit shall be capable of both solar-powered and AC-powered options. The operating electrical power for AC-powered controller systems shall be 120V. Solar-powered controller systems shall be designed with a solar panel and backup battery source capable of running the system for at least 15 days without sunlight.

System Notification Capable, Remote Data Available

Usage data regarding activation times and dates shall be accessible via direct connection to the controller. Activation and activity logs shall be downloadable and printable.

Configuration

All system configuration changes shall be able to be done through a direct connection to the controller. The system controller shall offer optional manual system configuration via dials within the controller cabinet. Configuration options shall allow for variation of system flash durations from 1 to 60 seconds.

Controller to Controller Communication

The controller shall support wireless communication across the roadway or for advanced warning flashers using spread spectrum radio frequency, thus eliminating the need for cable trenching. Range shall be at least 500 feet. Up to 10 optional RF channels shall be available to allow multiple systems to operate within close proximity of each other.

MUTCD Flash Pattern Compliance Now and for Any Future Changes

System shall support online configuration changes such that if MUTCD guidelines call for a new flash pattern, system can be upgraded within days.

Activation Log

The system shall be capable of logging all activations for a given period with a time stamp. The system shall record notifications of low battery voltage levels.

Guarantees and Warranties

The Contractor shall provide RRFB Systems from a manufacture that offers, as a customary trade practice in the connection with the purchase of any equipment, materials, or items incorporated into the project, a minimum two year guarantee or warranty on the controller cabinet and associated appurtenances, batteries and solar panel. The Contractor shall furnish to the Contracting Agency a written guarantee or warranty from the manufacturer.

General

Section 8-20.3(1) is supplemented with the following:

Removed Equipment

The existing *** luminaires and poles *** to be removed shall remain the property of WSDOT. The contractor shall deliver this equipment to the following addresses as appropriate:

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Poles:
Mottman Pole Yard
2214 RW Johnson Blvd
Tumwater, WA 98501

All other equipment:
Olympic Region Signal Shop
5720 Capitol Blvd SE
Tumwater, WA 98501

Delivery shall be made during normal business hours. The point of contact is the Olympic Region Signal Superintendent at (360)-357-2616.

All other existing electrical equipment and materials designated to be removed shall become the property of the Contractor and be removed from the project.

8-20.3(5) Conduit

8-20.3(5)A General

Section 8-20.3(5)A is supplemented with the following:

(*****)

Empty or spare PVC or HDPE conduits shall include location wire unless otherwise detailed in the plans. Location wire shall extend 12 feet into boxes and vaults. The Contractor shall coil and secure location wire at the entrance and exit points of all boxes and vaults. Splices shall be crimped using a non-insulated butt splice, soldered and covered with moisture-blocking heat shrink. All location wire splices shall be installed in the junction boxes, pull boxes, and cable vaults. Splices shall not be allowed within the conduit runs.

The Contractor shall verify that the location wire can be detected for the entire length of the conduit run using standard utility locating equipment.

8-20.3(5)B Conduit Type

The list in the second paragraph of Section 8-20.3(5)B is supplemented with the following:

(*****)

4. Traffic signal systems (with the exception of conduits containing only interconnect cables)

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- 5. Vehicle crossings (includes roadways, roadbeds, driveways, and road approaches)
- 6. Light Standard and Cabinet foundations

8-20.3(6) Junction Boxes, Cable Vaults, and Pull Boxes

The first paragraph of Section 8-20.3(6) is revised to read as follows:

(*****)

After final electrical inspection and acceptance is completed by the Contracting Agency Electrical Inspector, the Contractor shall weld all electrical junction box lids closed. Each side of the junction box shall have a one inch weld at the midpoint for a total of four welds per box. Welds shall be of consistent width and penetration and free of sharp edges and slag. Each weld shall be cleaned and painted with an approved zinc rich paint.

Standard Duty and Heavy-Duty junction boxes, pull boxes, and cable vaults shall be installed at the location specified in the Plans. Locations may be field adjusted to match grade, curb or sidewalk edges, or to avoid obstructions, with the approval of the Engineer. Junction boxes shall be located such that no conduit run exceeds 200 feet in length, as measured from outlet to outlet (does not apply to pull boxes or cable vaults). Junction boxes receiving stub conduits from signal poles or light standards shall not be placed more than ten feet from the pole served. The Contractor may install, at no expense to the Contracting Agency, such additional boxes as may be desired to facilitate the Work or to accommodate the requirements of the material used by the Contractor. Junction box installation shall conform to the details in the Standard Plans.

8-20.3(8) Wiring

The first sentence of the thirteenth paragraph of Section 8-20.3(8) is deleted and replaced by the following:

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(*****)

All wiring, exclusive of the previously mentioned illumination circuits, at all junction boxes, pull boxes, cable vaults, and cabinets shall have an approved tag with legends as follows:

8-20.3(9) Bonding, Grounding

Section 8-20.3(9) is supplemented with the following:

(*****)

All system bonding and grounding shall be complete prior to energizing electrical devices or equipment.

Permanent Signing

Materials

Roadside Sign Structures

Section 9-06.16 is supplemented with the following:

(January 3, 2011)

Perforated Steel Square Sign Post System

Where noted in the Plans, steel sign post systems shall be square, pre-punched galvanized steel tubing, that are NCHRP 350 Test Level 3 Certified and FHWA approved. The steel sign post system shall include all anchor sleeves, and other hardware required for a complete sign installation.

System Acceptance

Systems listed in the current QPL will be accepted per the QPL approval code. Systems not listed in the QPL will be accepted based on a Supplier's Certificate of

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Compliance. The Supplier's Certificate of Compliance will be a contract specific letter from the supplier stating the system is NCHRP 350 Test Level 3 compliant.

Construction Requirements

8-21.3(1) Sign Structures

The last sentence of Section 8-21.3(1) is deleted and replaced by the following:

8-21.3(1)

(*****)
Final lengths of 2.5" and 3" square steel posts will be determined or verified by the Engineer at the request of the Contractor prior to fabrication. Final lengths of steel W-beam post will be determined by the Engineer prior to fabrication.

Temporary Pavement Markings

Description

The first sentence of Section 8-23.1 is replaced with the following:

(*****)
Paint shall be used for temporary pavement markings on all planed surfaces opened to traffic. Temporary painted pavement marking installations shall be placed in accordance with Standard Plan M-20.10.

**Division 9
Materials**

**Appendices
(January 2, 2012)**

The following appendices are attached and made a part of this contract:

1 APPENDIX A:
2 Summary of Geotechnical Conditions
3

4 APPENDIX B:
5 TESC Narrative and SWPPP
6

7 ***
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9

10 **(April 1, 2019)**
11 **Standard Plans**

12 The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-
13 01 transmitted under Publications Transmittal No. PT 16-048, effective August 6, 2018 is made
14 a part of this contract.
15

16 The Standard Plans are revised as follows:
17

18 A-40.10

19 Section View, PCCP to HMA Longitudinal Joint, callout, was – “Sawed Groove ~ Width
20 3/16” (IN) MIN. to 5/16” (IN) MAX. ~ Depth 1” (IN) MIN. ~ see Std. Spec. 5-04.3(12)B” is
21 revised to read; “Sawed Groove ~ Width 3/16” (IN) MIN. to 5/16” (IN) MAX. ~ Depth 1”
22 (IN) MIN. ~ see Std. Spec. Section 5-04.3(12)A2”

23 Section View, Transverse Contraction Joint, dimension, was – “D/4” is revised to read:
24 “D/3 to D/4”
25

26 A-50.10

27 Sheet 2 of 2, Plan, with Single Slope Barrier, reference C-14a is revised to C-70.10
28

29 A-50.20

30 Sheet 2 of 2, Plan, with Anchored Barrier, reference C-14a is revised to C-70.10
31

32 A-50.30

33 Sheet 2 of 2, Plan (top), reference C-14a is revised to C-70.1
34

35 B-10.60

36 DELETED
37

38 B-82.20

39 DELETED
40

41 B-90.40

42 Valve Detail - DELETED
43

44 C-1b

45 STEEL POST Detail on page 2: The upper callout is changed from “3/4” (IN) DIAM. HOLE
46 (TYP.)” to “3/4” (IN) OR 13/16” (IN) DIAM. HOLE (TYP.)”
47

48 C-2C

49 CASE 9A (typical of 2 callouts): The dimensions were “3'-0” MIN. ~ TO FACE OF
50 GUARDRAIL”. are now revised to read “5'-0” MIN ~ TO FACE OF GUARDRAIL”.
51

1 C-4b
2 DELETED
3
4 C-4e
5 DELETED
6
7 C-4f
8 Sheet 1, BULLNOSE GRADING PLAN: Slopes shall be not steeper than 10H:1V for the
9 bullnose guardrail system including slopes into the guardrail face to 1 foot behind the
10 guardrail post.
11
12 Sheet 2, POST 1R & 1L, 2R & 2L, 3R TO 8R and 3L TO 8L, 9R TO 12 R and 9L TO 12L
13 elevation view details: Slopes into the guardrail face to 1 foot behind the guardrail post
14 shall not be steeper than 10H:1V.
15
16 Sheet 3, SECTION B, callout – was: “THE NUT SHALL BE ASTM A563D STEEL, AND
17 GALVANIZED ACCORDING TO STANDARD SPEC. 9-16.3(3).” Is revised to read: “THE
18 NUT SHALL BE ASTM A307 STEEL, AND GALVANIZED ACCORDING TO STANDARD
19 SPEC. 9-16.3(3).”
20
21 C-20.10
22 STEEL POST Detail: The upper callout is changed from “1/4” (IN) DIAM. HOLE FOR
23 ANTI-ROTATION 16d NAIL (TYP.)” to “1/4” (IN) OR 13/16” (IN) DIAM. HOLE FOR ANTI-
24 ROTATION 16d NAIL (TYP.)”
25 The lower callout is changed from “3/4” (IN) DIAM. HOLE FOR BUTTON HEAD BOLT
26 (TYP.)” to “3/4” (IN) OR 13/16” (IN) DIAM. HOLE FOR BUTTON HEAD BOLT (TYP.)”
27
28 C-20.14
29 CASE 3-31: The dimension was “5’-0” MIN” from the back of guardrail to the center of
30 railroad signal support is now revised to “5’-0” MIN” from face of guardrail to the front
31 edge of the railroad signal support.
32
33 Note 3, was – “The slope from the edge of the shoulder into the face of the guardrail
34 cannot exceed 10H : 1V when the face of the guardrail is less than 12’ – 0” from the edge
35 of the shoulder.” is revised to read: “The slope from the edge of the shoulder into the face
36 of the guardrail cannot be steeper than 10H : 1V when the face of the guardrail is less
37 than 12’ – 0” from the edge of the shoulder. The slope from the edge of the shoulder into
38 the face of the guardrail cannot be steeper than 6H : 1V when the guardrail is 12’ – 0” or
39 more from the edge of the shoulder.”
40
41 C-20.18
42 ALL CASES: The dimensions were “3’-0” MIN” from the face of guardrail to the front edge
43 of the fixed feature are now revised to “5’-0” MIN” from the face of guardrail to the front
44 edge of the fixed feature.
45
46 Note 1, was – “The slope from the edge of the shoulder into the face of the guardrail
47 should not exceed 10H : 1V when the guardrail is within 12’ – 0” from the edge of the
48 shoulder.” Is revised to read: “The slope from the edge of the shoulder into the face of the
49 guardrail should not be steeper than 10H : 1V when the guardrail is less than 12’ – 0”
50 from the edge of the shoulder. The slope from the edge of the shoulder into the face of
51 the guardrail should not be steeper than 6H : 1V when the guardrail is 12’ – 0” or more
52 from the edge of shoulder.”

1
2 C-20.41
3 BOX CULVERT POST, ELEVATION VIEW Detail: The upper callout is changed from “3/4”
4 (IN) DIAM. HOLE” to “3/4” (IN) OR 13/16” (IN) DIAM. HOLE”
5
6 C-20.45
7 STEEL POST Detail: The upper callout is changed from “1/4” (IN) DIAM. HOLE FOR
8 ANTI-ROTATION 16d NAIL (TYP.)” to “1/4” (IN) OR 13/16” (IN) DIAM. HOLE FOR ANTI-
9 ROTATION 16d NAIL (TYP.)”
10 The lower callout is changed from “3/4” (IN) DIAM. HOLE FOR BUTTON HEAD BOLT
11 (TYP.) ~ SEE DETAIL AT RIGHT” to “3/4” (IN) OR 13/16” (IN) DIAM. HOLE FOR BUTTON
12 HEAD BOLT (TYP.) ~ SEE DETAIL AT RIGHT”
13
14 C-22.14
15 DELETED
16
17 C-22.16
18 Note 3, formula, was: “Elevation G = (Elevation S – D x (0.1) + 31” is revised to read:
19 “Elevation G = (Elevation S – D x (0.1) + 31/12”
20
21 C-22.40
22 PLAN VIEW, MSKT-SP-MGS (TL-3) SHOWN: The dimension was “4’-0” MIN” from the
23 face of the terminal to the edge of the widened embankment is now revised to “4’-0” MIN”
24 from the back of the terminal post to the edge of the widened embankment.
25
26 Elevation View, MSKT-SP-MGS (TL-3), dimension, MSKT-SP-MGS (TL-3) SYSTEM
27 LENGTH = 50’ – 0” , dimension is revised to read: 46’ – 10 1/2”
28
29 Elevation View, SOFTSTOP (TL-3), dimension, SOFTSTOP (TL-3) SYSTEM
30 LENGTH = 50’ – 9 1/2” , dimension is revised to read: 50’ – 10 1/2”
31
32 Note 6, was – “...a maximum taper of 25.4 : 1 or flatter is allowed over the system length
33 of 50’ – 9 1/2” with a maximum...” is revised to read: “...a maximum taper of 25.44 : 1 or
34 flatter is allowed over the system length of 50’ – 10 1/2” with a maximum...”
35
36 C-22.45
37 PLAN VIEW, MSKT-SP-MGS (TL-2) SHOWN: The dimension was “4’-0” MIN” from the
38 face of the terminal to the edge of the widened embankment is now revised to “4’-0” MIN”
39 from the back of the terminal post to the edge of the widened embankment.
40
41
42 Elevation View, MSKT-SP-MGS (TL-2), dimension, MSKT-SP-MGS (TL-2) SYSTEM
43 LENGTH = 25’ – 0” , dimension is revised to read 34’ – 4 1/2”
44
45 Elevation View, SOFTSTOP (TL-2), dimension, SOFTSTOP (TL-2) SYSTEM
46 LENGTH = 38’ – 3 1/2” , dimension is revised to read 38’ – 4 1/2”
47
48 Note 6, was – “...flare of 38.29 : 1 or flatter is allowed over the system length of 38’ – 3
49 1/2” with a maximum...” is revised to read: “...flare of 38.38 : 1 or flatter is allowed over the
50 system length of 38’ – 4 1/2” with a maximum...”
51
52 C-25.26

1 Elevation View, TYPE 23: The guardrail height dimension was 2'-8" from the top of the
2 thrie beam to the top of the bridge curb is now revised to 2'-8" from the top of the thrie
3 beam to the top of the ground line.
4
5 C-25.80
6 Plan View, callout, was – "12" (IN) BLOCKOUT" is revised to read; "12" (IN) or 8" (IN)
7 BLOCKOUT (12" (IN) SHOWN)"
8 Elevation View, add labels to posts (below view); beginning at left side of view – Label
9 Posts as follows; POST 1, POST 2 through POST 6".
10 General Notes, add Note 6. Note reads as follows; "6. Post 1 shall use an 8 inch blockout,
11 and posts 2 through post 6 shall use 12 inch or 8 inch blockouts."
12
13 C-40.14
14 DELETED
15
16 C-90.10
17 DELETED
18
19 D-10.10
20 Wall Type 1 may be used if no traffic barrier is attached on top of the wall. Walls with traffic
21 barriers attached on top of the wall are considered non-standard and shall be designed
22 in accordance with the current WSDOT Bridge Design Manual (BDM) and the revisions
23 stated in the 11/3/15 Bridge Design memorandum.
24
25 D-10.15
26 Wall Type 2 may be used if no traffic barrier is attached on top of the wall. Walls with traffic
27 barriers attached on top of the wall are considered non-standard and shall be designed
28 in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15
29 Bridge Design memorandum.
30
31 D-10.20
32 Wall Type 3 may be used in all cases. The last sentence of Note 6 on Wall Type 3 shall
33 be revised to read: The seismic design of these walls has been completed using a site
34 adjusted (effective) peak ground acceleration of 0.32g.
35
36 D-10.25
37 Wall Type 4 may be used in all cases. The last sentence of Note 6 on Wall Type 4 shall
38 be revised to read: The seismic design of these walls has been completed using a site
39 adjusted (effective) peak ground acceleration of 0.32g.
40
41 D-10.30
42 Wall Type 5 may be used in all cases.
43
44 D-10.35
45 Wall Type 6 may be used in all cases.
46
47 D-10.40
48 Wall Type 7 may be used if no traffic barrier is attached on top of the wall. Walls with traffic
49 barriers attached on top of the wall are considered non-standard and shall be designed
50 in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15
51 Bridge Design memorandum.
52

1 D-10.45
2 Wall Type 8 may be used if no traffic barrier is attached on top of the wall. Walls with traffic
3 barriers attached on top of the wall are considered non-standard and shall be designed
4 in accordance with the current WSDOT BDM and the revisions stated in the revisions
5 stated in the 11/3/15 Bridge Design memorandum.
6
7 D-15.10
8 STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls"
9 are withdrawn. Special designs in accordance with the current WSDOT BDM are required
10 in place of these STD Plans.
11
12 D-15.20
13 STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls"
14 are withdrawn. Special designs in accordance with the current WSDOT BDM are required
15 in place of these STD Plans.
16
17 D-15.30
18 STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls"
19 are withdrawn. Special designs in accordance with the current WSDOT BDM are required
20 in place of these STD Plans.
21
22 F-10.12
23 Section Title, was – "Depressed Curb Section" is revised to read: "Depressed Curb and
24 Gutter Section"
25
26 F-10.40
27 "EXTRUDED CURB AT CUT SLOPE", Section detail - Deleted
28
29 F-10.42
30 DELETE – "Extruded Curb at Cut Slope" View
31
32 H-70.20
33 Sheet 2, Spacing Detail, Mailbox Support Type 1, reference to Standard Plan I-70.10 is
34 revised to H-70.10
35
36 I-30.30
37 8" Diameter Wattle Spacing Table, lower left corner, was – "Slope:1H : 1V, Maximum
38 Spacing:10' – 0'" is revised to read: "Slope:1H : 1V, Maximum Spacing:8' – 0'".
39
40 J-10.21
41 Note 18, was – "When service cabinet is installed within right of way fence, see Standard
42 Plan J-10.22 for details." Is revised to read; "When service cabinet is installed within right
43 of way fence, or the meter base is mounted on the exterior of the cabinet, see Standard
44 Plan J-10.22 for details."
45
46 J-10.22
47 Key Note 1, was – "Meter base per serving utility requirements~ as a minimum, the meter
48 base shall be safety socket box with factory-installed test bypass facility that meets the
49 requirements of EUSERC drawing 305." Is revised to read; "Meter base per serving utility
50 requirements~ as a minimum, the meter base shall be safety socket box with factory-
51 installed test bypass facility that meets the requirements of EUSERC drawing 305. When

1 the utility requires meter base to be mounted on the side or back of the service cabinet,
2 the meter base enclosure shall be fabricated from type 304 stainless steel.”
3 Key Note 4, “Test with (SPDT Snap Action, Positive close 15 Amp – 120/277 volt “T”
4 rated). Is revised to read: “Test Switch (SPDT snap action, positive close 15 amp –
5 120/277 volt “T” rated).”
6 Key Note 14, was – “Hinged dead front with ¼ turn fasteners or slide latch.” Is revised to
7 read; “Hinged dead front with ¼ turn fasteners or slide latch. ~ Dead front panel bolts
8 shall not extend into the vertical limits of the breaker array(s).”
9 Key Note 15, was – “Cabinet Main Bonding Jumper. Buss shall be 4 lug tinned copper.
10 See Cabinet Main bonding Jumper detail, Standard Plan J-3b.” is revised to read;
11 “Cabinet Main Bonding Jumper Assembly ~ Buss shall be 4 lug tinned copper ~ See
12 Standard Plan J-10.20 for Cabinet Main Bonding Jumper Assembly details.”
13 Note 1, was – “...socket box mounting detail, see Standard Plan J-3b.” is revised to read
14 to read: “...socket box mounting detail, see Standard Plan J-10.20.”
15 Note 6, was – “...See door hinge detail, Standard Plan J-3b.” is revised to read: “...See
16 door hinge detail, Standard Plan J-10.20.”
17

18 J-20.10

19 Add Note 5, “5. One accessible pedestrian signal assembly per pedestrian pushbutton
20 post.”
21

22 J-20.11

23 Sheet 2, Foundation Detail, Elevation, callout – “Type 1 Signal Pole” is revised to read:
24 “Type PS or Type 1 Signal Pole”
25 Sheet 2, Foundation Detail, Elevation, add note below Title, “(Type 1 Signal Pole Shown)”
26 Add Note 6, “6. One accessible pedestrian signal assembly per pedestrian pushbutton
27 post.”
28

29 J-20.26

30 Add Note 1, “1. One accessible pedestrian pushbutton station per pedestrian pushbutton
31 post.”
32

33 J-20.16

34 View A, callout, was – LOCK NIPPLE, is revised to read; CHASE NIPPLE
35

36 J-21.10

37 Sheet 1, Elevation View, Round Concrete Foundation Detail, callout – “ANCHOR BOLTS
38 ~ ¾” (IN) x 30” (IN) FULL THREAD ~ THREE REQ'D. PER ASSEMBLY” IS REVISED TO
39 READ: “ANCHOR BOLTS ~ ¾” (IN) x 30” (IN) FULL THREAD ~ FOUR REQ'D. PER
40 ASSEMBLY”

41 Sheet 1 of 2, Elevation view (Round), add dimension depicting the distance from the top
42 of the foundation to find 2 #4 reinforcing bar shown, to read; 3” CLR.. Delete “(TYP.)” from
43 the 2 ½” CLR. dimension, depicting the distance from the bottom of the foundation to find
44 2 # 4 reinf. Bar.

45 Sheet 1 of 2, Elevation view (Square), add dimension depicting the distance from the top
46 of the foundation to find 1 #4 reinforcing bar shown, to read; 3” CLR. Delete “(TYP.)” from
47 the 2 ½” CLR. dimension, depicting the distance from the bottom of the foundation to find
48 1 # 4 reinf. Bar.

49 Sheet 2 of 2, Elevation view (Round), add dimension depicting the distance from the top
50 of the foundation to find 2 #4 reinforcing bar shown, to read; 3” CLR. Delete “(TYP.)” from
51 the 2 ½” CLR. dimension, depicting the distance from the bottom of the foundation to find
52 2 # 4 reinf. Bar.

1 Sheet 2 of 2, Elevation view (Square), add dimension depicting the distance from the top
 2 of the foundation to find 1 #4 reinforcing bar shown, to read; 3" CLR. Delete "(TYP.)" from
 3 the 2 1/2" CLR. dimension, depicting the distance from the bottom of the foundation to find
 4 1 # 4 reinf. Bar.
 5 Detail F, callout, "Heavy Hex Clamping Bolt (TYP.) ~ 3/4" (IN) Diam. Torque Clamping
 6 Bolts (see Note 3)" is revised to read; "Heavy Hex Clamping Bolt (TYP.) ~ 3/4" (IN) Diam.
 7 Torque Clamping Bolts (see Note 1)"
 8 Detail F, callout, "3/4" (IN) x 2' - 6" Anchor Bolt (TYP.) ~ Four Required (See Note 4)" is
 9 revised to read; "3/4" (IN) x 2' - 6" Anchor Bolt (TYP.) ~ Three Required (See Note 2)"

10
 11 J-21.15
 12 Partial View, callout, was - LOCK NIPPLE ~ 1 1/2" DIAM., is revised to read; CHASE
 13 NIPPLE ~ 1 1/2" (IN) DIAM.

14
 15 J-21.16
 16 Detail A, callout, was - LOCKNIPPLE, is revised to read; CHASE NIPPLE

17
 18 J-22.15
 19 Ramp Meter Signal Standard, elevation, dimension 4' - 6" is revised to read; 6'-0"
 20 (2x) Detail A, callout, was - LOCK NIPPLE ~ 1 1/2" DIAM. is revised to read; CHASE
 21 NIPPLE ~ 1 1/2" (IN) DIAM.

22
 23 J-40.10
 24 Sheet 2 of 2, Detail F, callout, "12 - 13 x 1 1/2" S.S. PENTA HEAD BOLT AND 12" S. S.
 25 FLAT WASHER" is revised to read; "12 - 13 x 1 1/2" S.S. PENTA HEAD BOLT AND 1/2"
 26 (IN) S. S. FLAT WASHER"

27
 28 J-60.14
 29 All references to J-16b (6x) are revised to read; J-60.11

30
 31 K-80.30
 32 In the NARROW BASE, END view, the reference to Std. Plan C-8e is revised to Std. Plan
 33 K-80.35
 34 Plan Title, was "ALTERNATIVE TEMPORARY CONC. BARRIER (F-SHAPE)" is revised
 35 to read: "CONCRETE BARRIER TYPE F"

36
 37 The following are the Standard Plan numbers applicable at the time this project was
 38 advertised. The date shown with each plan number is the publication approval date
 39 shown in the lower right-hand corner of that plan. Standard Plans showing different dates
 40 shall not be used in this contract.

41

A-10.10-00.....8/7/07	A-40.00-00.....8/11/09	A-50.30-00.....11/17/08
A-10.20-00.....10/5/07	A-40.10-03.....12/23/14	A-50.40-00.....11/17/08
A-10.30-00.....10/5/07	A-40.15-00.....8/11/09	A-60.10-03.....12/23/14
A-20.10-00.....8/31/07	A-40.20-04.....1/18/17	A-60.20-03.....12/23/14
A-30.10-00.....11/8/07	A-40.50-02.....12/23/14	A-60.30-01.....6/28/18
A-30.30-01.....6/16/11	A-50.10-00.....11/17/08	A-60.40-00.....8/31/07
A-30.35-00.....10/12/07	A-50.20-01.....9/22/09	

42

B-5.20-02.....1/26/17	B-30.50-03.....2/27/18	B-75.20-02.....2/27/18
B-5.40-02.....1/26/17	B-30.70-04.....2/27/18	B-75.50-01.....6/10/08
B-5.60-02.....1/26/17	B-30.80-01.....2/27/18	B-75.60-00.....6/8/06

B-10.20-02.....3/2/18	B-30.90-02.....1/26/17	B-80.20-00.....6/8/06
B-10.40-01.....1/26/17	B-35.20-00.....6/8/06	B-80.40-00.....6/1/06
B-10.70-00.....1/26/17	B-35.40-00.....6/8/06	B-85.10-01.....6/10/08
B-15.20-01.....2/7/12	B-40.20-00.....6/1/06	B-85.20-00.....6/1/06
B-15.40-01.....2/7/12	B-40.40-02.....1/26/17	B-85.30-00.....6/1/06
B-15.60-02.....1/26/17	B-45.20-01.....7/11/17	B-85.40-00.....6/8/06
B-20.20-02.....3/16/12	B-45.40-01.....7/21/17	B-85.50-01.....6/10/08
B-20.40-04.....2/27/18	B-50.20-00.....6/1/06	B-90.10-00.....6/8/06
B-20.60-03.....3/15/12	B-55.20-02.....2/27/18	B-90.20-00.....6/8/06
B-25.20-02.....2/27/18	B-60.20-01.....6/28/18	B-90.30-00.....6/8/06
B-25.60-02.....2/27/18	B-60.40-01.....2/27/18	B-90.40-01.....1/26/17
B-30.10-03.....2/27/18	B-65.20-01.....4/26/12	B-90.50-00.....6/8/06
B-30.15-00.....2/27/18	B-65.40-00.....6/1/06	B-95.20-01.....2/3/09
B-30.20-04.....2/27/18	B-70.20-00.....6/1/06	B-95.40-01.....6/28/18
B-30.30-03.....2/27/18	B-70.60-01.....1/26/17	
B-30.40-03.....2/27/18		

1

C-1.....6/28/18	C-20.15-02.....6/11/14	C-40.18-03.....7/21/17
C-1a.....7/14/15	C-20.18-02.....6/11/14	C-70.10-01.....6/17/14
C-1b.....7/14/15	C-20.19-02.....6/11/14	C-75.10-01.....6/11/14
C-1d.....10/31/03	C-20.40-06.....7/21/17	C-75.20-01.....6/11/14
C-2c.....6/21/06	C-20.41-01.....7/14/15	C-75.30-01.....6/11/14
C-4f.....7/2/12	C-20.42-05.....7/14/15	C-80.10-01.....6/11/14
C-6a.....10/14/09	C-20.45.01.....7/2/12	C-80.20-01.....6/11/14
C-7.....6/16/11	C-22.16-06.....7/21/17	C-80.30-01.....6/11/14
C-7a.....6/16/11	C-22.40-06.....7/21/17	C-80.40-01.....6/11/14
C-8.....2/10/09	C-22.45-03.....7/21/17	C-80.50-00.....4/8/12
C-8a.....7/25/97	C-23.60-04.....7/21/17	C-85.10-00.....4/8/12
C-8b.....2/29/16	C.24.10-01.....6/11/14	C-85.11-00.....4/8/12
C-8e.....2/21/07	C-25.20-06.....7/14/15	C-85.14-01.....6/11/14
C-8f.....6/30/04	C-25.22-05.....7/14/15	C-85.15-01.....6/30/14
C-16a.....7/21/17	C-25.26-03.....7/14/15	C-85.16-01.....6/17/14
C-20.10-04.....7/21/17	C-25.30-00.....6/28/18	C-85.18-01.....6/11/14
C-20.11-00.....7/21/17	C-25.80-04.....7/15/16	C-85.20-01.....6/11/14
C-20.14-03.....6/11/14	C-40.16-02.....7/2/12	

2

D-2.04-00.....11/10/05	D-2.48-00.....11/10/05	D-3.17-02.....5/9/16
D-2.06-01.....1/6/09	D-2.64-01.....1/6/09	D-4.....12/11/98
D-2.08-00.....11/10/05	D-2.66-00.....11/10/05	D-6.....6/19/98
D-2.14-00.....11/10/05	D-2.68-00.....11/10/05	D-10.10-01.....12/2/08
D-2.16-00.....11/10/05	D-2.80-00.....11/10/05	D-10.15-01.....12/2/08
D-2.18-00.....11/10/05	D-2.82-00.....11/10/05	D-10.20-00.....7/8/08
D-2.20-00.....11/10/05	D-2.84-00.....11/10/05	D-10.25-00.....7/8/08
D-2.32-00.....11/10/05	D-2.86-00.....11/10/05	D-10.30-00.....7/8/08
D-2.34-01.....1/6/09	D-2.88-00.....11/10/05	D-10.35-00.....7/8/08
D-2.36-03.....6/11/14	D-2.92-00.....11/10/05	D-10.40-01.....12/2/08
D-2.42-00.....11/10/05	D-3.09-00.....5/17/12	D-10.45-01.....12/2/08
D-2.44-00.....11/10/05	D-3.10-01.....5/29/13	D-15.10-01.....12/2/08
D-2.60-00.....11/10/05	D-3.11-03.....6/11/14	D-15.20-03.....5/9/16
D-2.62-00.....11/10/05	D-3.15-02.....6/10/13	D-15.30-01.....12/02/08
D-2.46-01.....6/11/14	D-3.16-02.....5/29/13	

3

	E-1.....2/21/07	E-4.....8/27/03	
	E-2.....5/29/98	E-4a.....8/27/03	
1	F-10.12-03.....6/11/14	F-10.62-02.....4/22/14	F-40.15-03.....6/29/16
	F-10.16-00.....12/20/06	F-10.64-03.....4/22/14	F-40.16-03.....6/29/16
	F-10.18-01.....7/11/17	F-30.10-03.....6/11/14	F-45.10-02.....7/15/16
	F-10.40-03.....6/29/16	F-40.12-03.....6/29/16	F-80.10-04.....7/15/16
	F-10.42-00.....1/23/07	F-40.14-03.....6/29/16	
2	G-10.10-00.....9/20/07	G-25.10-04.....6/10/13	G-90.10-03.....7/11/17
	G-20.10-02.....6/23/15	G-30.10-04.....6/23/15	G-90.11-00.....4/28/16
	G-22.10-04.....6/28/18	G-50.10-03.....6/28/18	G-90.20-05.....7/11/17
	G-24.10-00.....11/8/07	G-60.10-04.....6/28/18	G-90.30-04.....7/11/17
	G-24.20-01.....2/7/12	G-60.20-02.....6/18/15	G-90.40-02.....4/28/16
	G-24.30-02.....6/28/18	G-60.30-02.....6/18/15	G-95.10-02.....6/28/18
	G-24.40-07.....6/28/18	G-70.10-03.....6/18/15	G-95.20-03.....6/28/18
	G-24.50-04.....7/11/17	G-70.20-04.....7/21/17	G-95.30-03.....6/28/18
	G-24.60-05.....6/28/18	G-70.30-04.....7/21/17	
3	H-10.10-00.....7/3/08	H-32.10-00.....9/20/07	H-70.10-01.....2/7/12
	H-10.15-00.....7/3/08	H-60.10-01.....7/3/08	H-70.20-01.....2/16/12
	H-30.10-00.....10/12/07	H-60.20-01.....7/3/08	H-70.30-02.....2/7/12
4	I-10.10-01.....8/11/09	I-30.20-00.....9/20/07	I-40.20-00.....9/20/07
	I-30.10-02.....3/22/13	I-30.30-01.....6/10/13	I-50.20-01.....6/10/13
	I-30.15-02.....3/22/13	I-30.40-01.....6/10/13	I-60.10-01.....6/10/13
	I-30.16-00.....3/22/13	I-30.60-01.....3/7/18	I-60.20-01.....6/10/13
	I-30.17-00.....3/22/13	I-40.10-00.....9/20/07	I-80.10-02.....7/15/16
5	J-10.....7/18/97	J-28.22-00.....8/07/07	J-50.25-00.....6/3/11
	J-10.10-03.....6/3/15	J-28.24-01.....6/3/15	J-50.30-00.....6/3/11
	J-10.15-01.....6/11/14	J-28.26-01.....12/02/08	J-60.05-01.....7/21/16
	J-10.16-00.....6/3/15	J-28.30-03.....6/11/14	J-60.11-00.....5/20/13
	J-10.17-00.....6/3/15	J-28.40-02.....6/11/14	J-60.12-00.....5/20/13
	J-10.18-00.....6/3/15	J-28.42-01.....6/11/14	J-60.13-00.....6/16/10
	J-10.20-01.....6/1/16	J-28.43-01.....6/28/18	J-60.14-00.....6/16/10
	J-10.21-00.....6/3/15	J-28.45-03.....7/21/16	J-75.10-02.....7/10/15
	J-10.22-00.....5/29/13	J-28.50-03.....7/21/16	J-75.20-01.....7/10/15
	J-10.25-00.....7/11/17	J-28.60-02.....7/21/16	J-75.30-02.....7/10/15
	J-12.15-00.....6/28/18	J-28.70-03.....7/21/17	J-75.40-02.....6/1/16
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	J-20.20-02.....5/20/13	J-40.30-04.....4/28/16	J-90.20-03.....6/28/18
	J-20.26-01.....7/12/12	J-40.35-01.....5/29/13	J-90.21-02.....6/28/18
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	J-21.15-01.....6/10/13	J-40.37-02.....7/21/17	
	J-21.16-01.....6/10/13	J-40.38-01.....5/20/13	

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J-28.10-01.....5/11/11	J-50.20-00.....6/3/11

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K-70.20-01.....6/1/16
K-80.10-01.....6/1/16
K-80.20-00.....12/20/06
K-80.30-00.....2/21/07
K-80.35-00.....2/21/07
K-80.37-00.....2/21/07

2

L-10.10-02.....6/21/12	L-40.10-02.....6/21/12	L-70.10-01.....5/21/08
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L-30.10-02.....6/11/14	L-40.20-02.....6/21/12	

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M-1.20-03.....6/24/14	M-12.10-01.....6/28/18	M-40.10-03.....6/24/14
M-1.40-02.....6/3/11	M-15.10-01.....2/6/07	M-40.20-00...10/12/07
M-1.60-02.....6/3/11	M-17.10-02.....7/3/08	M-40.30-01.....7/11/17
M-1.80-03.....6/3/11	M-20.10-02.....6/3/11	M-40.40-00.....9/20/07
M-2.20-03.....7/10/15	M-20.20-02.....4/20/15	M-40.50-00.....9/20/07
M-2.21-00.....7/10/15	M-20.30-04.....2/29/16	M-40.60-00.....9/20/07
M-3.10-03.....6/3/11	M-20.40-03.....6/24/14	M-60.10-01.....6/3/11
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M-3.40-03.....6/3/11	M-24.40-02.....4/20/15	M-80.10-01.....6/3/11
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M-5.10-02.....6/3/11	M-24.60-04.....6/24/14	M-80.30-00.....6/10/08
M-7.50-01.....1/30/07	M-24.65-00.....7/11/17	
M-9.50-02.....6/24/14	M-24.66-00.....7/11/17	
M-9.60-00.....2/10/09		
M-11.10-02.....7/11/17		

4

5

6

MASON TRANSIT AUTHORITY
Log Yard Road and SR 3 Roundabout Project

SECTION V

CONTRACT DRAWINGS

T. 23 N., R. 01 W., S. 21, W.M.

BELFAIR

SR-3 AND LOG YARD ROAD INTERSECTION

BELFAIR, WASHINGTON
MASON COUNTY

BID PACKAGE SHEET SET

OWNER/APPLICANT

MASON TRANSIT AUTHORITY
790 EAST JOHNS PRAIRIE ROAD
SHELTON, WA 98584
(360) 426-9434
CONTACT: DANETTE BRANNIN, GENERAL MANAGER

UTILITIES

POWER: PUD3
(360) 432-5268
CONTACT: TOM JOHNSON

PHONE:
CENTURYLINK
(360) 478-5530
CONTACT: ROYCE KLEIN

STORMWATER:
MASON COUNTY
(360) 427-9670 EXT 769
CONTACT: LORETTA SWANSON

WATER:
BELFAIR WATER DISTRICT
(360) 275-3008
CONTACT: DALE WEBB

UTILITY NOTE

UTILITIES SHOWN HEREON ARE FROM MAPPING VISIBLE SURFACE APPURTENANCES, AND MAPPING UTILITY PAINT MARKS FROM A UTILITY LOCATING SERVICE. BURIED UTILITIES ARE ONLY SHOWN AS APPROXIMATE AND SHOULD BE VERIFIED BEFORE CONSTRUCTION.

NOTES

- WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE PROJECT SPECIFICATIONS AND THE 2018 WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION WHICH ARE HEREBY REFERENCED AS A PART OF THESE PLANS.
- THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SET ARE BASED UPON SURVEY, PREPARED BY MTN 2 COAST LLC. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED WORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER OR ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE WORK WHICH WOULD BE AFFECTED.

CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON THE PROJECT SURVEY AND OTHER RECORDS OF UTILITIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CALL 811 A MINIMUM OF 48 HOURS PRIOR TO PLANNED EXCAVATION. TO REQUEST UTILITY LOCATES, CALL OR 811.

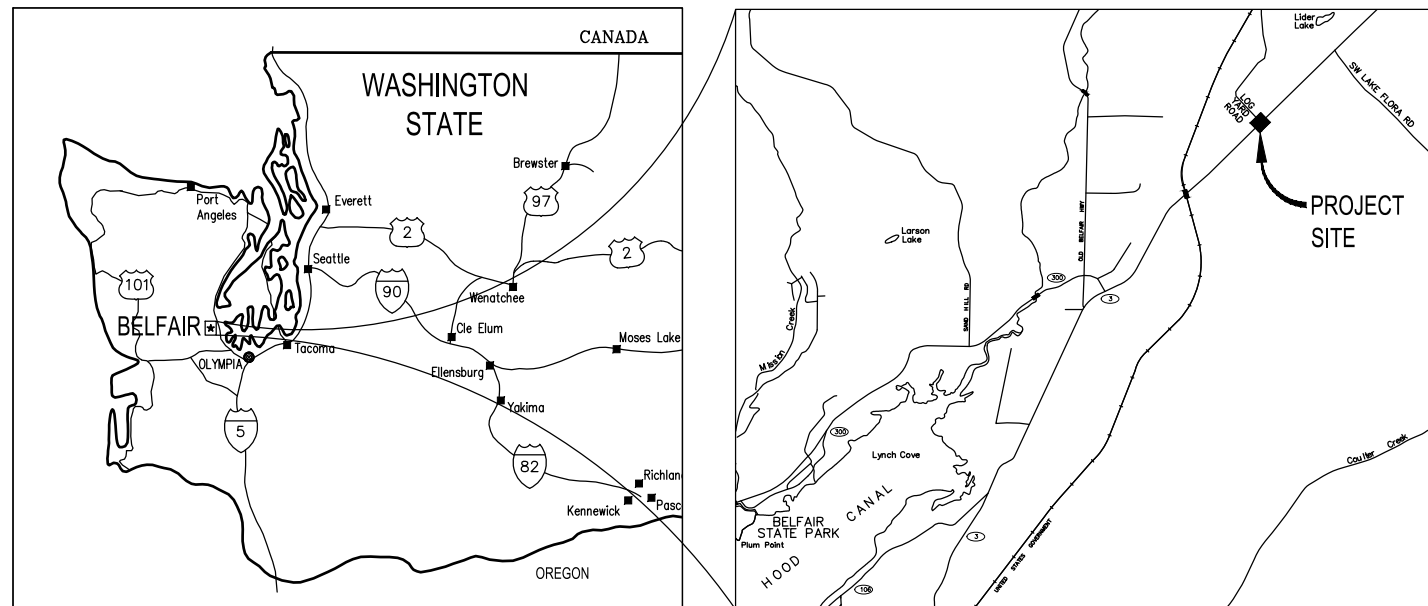
CONSULTANTS

SCJ ALLIANCE
8730 TALLON LANE NE, STE 200
LACEY, WA 98516
(360) 352-1465
CONTACT: PATRICK HOLM, P.E.

SURVEY:
MTN2COAST, LLC
1506 FAIRVIEW ST SE
OLYMPIA, WA 98501
(360) 239-1497
CONTACT: BLAIR PRIGGE, PLS., E.I.T.

VOLUME I		
SHEET NO.	DRAWING NO.	DESCRIPTION
1	CV-T	COVER SHEET
2	AL-1	HORIZONTAL ALIGNMENT
3	AL-2	HORIZONTAL ALIGNMENT
4	RM-1	REMOVAL AND TESC PLANS
5	RM-2	REMOVAL AND TESC PLANS
6	RM-3	REMOVAL AND TESC PLANS
7	RM-4	REMOVAL AND TESC PLANS
8	RM-5	REMOVAL AND TESC PLANS
9	RM-6	EROSION CONTROL DETAILS
10	XS-1	ROADWAY TYPICAL SECTIONS
11	XS-2	ROADWAY TYPICAL SECTIONS
12	XS-3	ROADWAY TYPICAL SECTIONS
13	XS-4	ROADWAY TYPICAL SECTIONS
14	XS-5	ROADWAY TYPICAL SECTIONS
15	XS-6	ROADWAY TYPICAL SECTIONS
16	SD-1	STORM PLAN AND PROFILE
17	SD-2	STORM PLAN AND PROFILE
18	SD-3	STORM PLAN AND PROFILE
19	SD-4	STORM PLAN AND PROFILE
20	SD-5	STORM PLAN AND PROFILE
21	SD-6	STORM PLAN AND PROFILE
22	SD-7	STORM PLAN AND PROFILE
23	PV-1	PAVING PLAN
24	PV-2	PAVING PLAN
25	PV-3	PAVING PLAN
26	PV-4	PAVING PLAN
27	PV-5	PAVING PLAN
28	PV-6	TRUCK APRON JOINTING DETAIL
29	PP-1	PLAN AND PROFILE
30	PP-2	PLAN AND PROFILE
31	PP-3	PLAN AND PROFILE
32	PP-4	PLAN AND PROFILE
33	PP-5	PLAN AND PROFILE
34	PP-6	PLAN AND PROFILE
35	ADA-1	ACCESSIBILITY DETAIL
36	ADA-2	ACCESSIBILITY DETAIL
37	CH-1	CHANNELIZATION AND SIGNAGE PLAN
38	CH-2	CHANNELIZATION AND SIGNAGE PLAN
39	CH-3	CHANNELIZATION AND SIGNAGE PLAN
40	CH-4	CHANNELIZATION AND SIGNAGE PLAN
41	CH-5	CHANNELIZATION AND SIGNAGE PLAN
42	CH-6	SIGN SPECIFICATION SHEET
43	CH-7	RECTANGULAR RAPID FLASHING BEACON (RRFB) DETAIL
44	IL-1	ILLUMINATION PLAN
45	UT-1	UTILITY RELOCATION PLAN
46	TC-01	TRAFFIC CONTROL PLAN
47	TC-02	TRAFFIC CONTROL PLAN
48	TC-03	TRAFFIC CONTROL PLAN
49	TC-04	TRAFFIC CONTROL PLAN
50	TC-05	TRAFFIC CONTROL PLAN
51	TC-06	TRAFFIC CONTROL PLAN
52	TC-07	TRAFFIC CONTROL PLAN

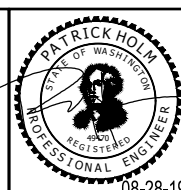
VOLUME II		
SHEET NO.	DRAWING NO.	DESCRIPTION
1	AL-1	HORIZONTAL ALIGNMENT
2	EC-1	REMOVAL AND TESC PLAN
3	SP-1	SITE PLAN
4	SP-5	RAMP GRADING DETAILS
5	SP-6	RAMP GRADING DETAILS
6	SD-1	GRADING AND DRAINAGE PLAN
7	SD-3	DRAINAGE DETAILS
8	PP-1	PLAN, PROFILE, AND PAVING
9	PM-1	PAVEMENT MARKING
10	XS-1	TYPICAL SECTION
11	UT-2	UTILITY PLAN



Aug 28, 2019 4:10:13pm - User: kema.melvin K:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-CV-T.DWG

Δ	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH	N. MAYFIELD	JOB No.: 0738.05
				CHECKED BY: P. HOLM	DRAWING FILE No.: 0738.05-CV-T

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED



SCJ ALLIANCE
CONSULTING SERVICES
8730 TALLON LANE NE, SUITE 200, LACEY, WASHINGTON 98516
P: 360-352-1465 F: 360-352-1509
SCJALLIANCE.COM

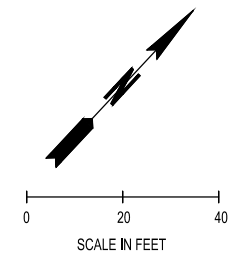
PROJECT NAME:

MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

COVER SHEET

DRAWING No.: CV-T
SHEET No.: 1 OF 52

T. 23 N., R. 01 W., S. 21, W.M.



ALIGNMENT LEGEND

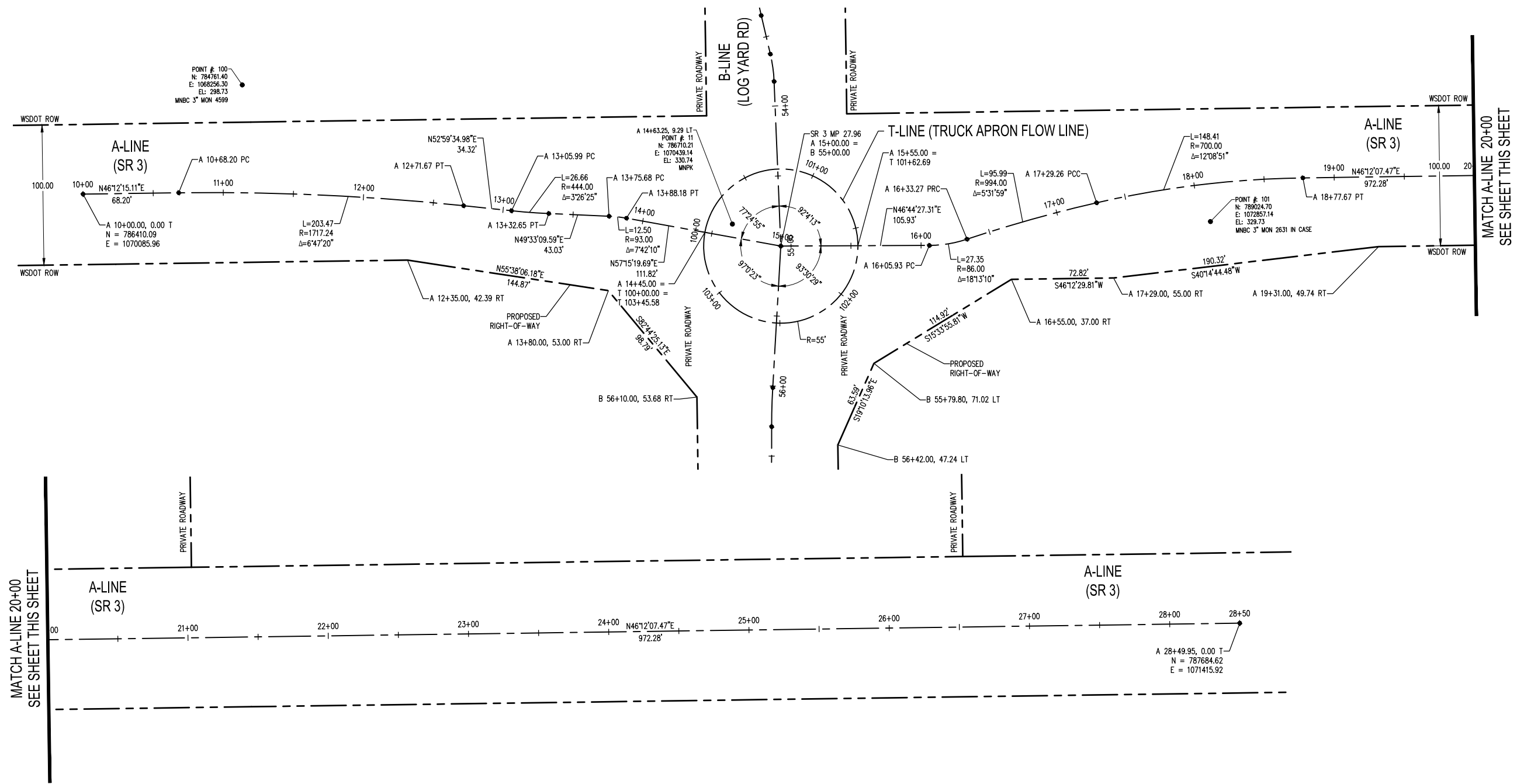
- PROPERTY LINE/RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- BRASS CAP
- SURVEY MARKER

DATUM

HORIZONTAL - WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 83/2011 BASED ON TIES TO WSDOT MON 4599.
 VERTICAL - NAVD 88 BASED ON TIES TO WSDOT MONUMENT 4599, ELEVATION 298.73.

SURVEY NOTES

1. INSTRUMENT USED: SOKKIA SRX 3 TOTAL STATION AND TOPCON GR5 GPS.
2. THIS SURVEY MEETS OR EXCEEDS THE STANDARDS OF WAC 332-130-090
3. SURVEY COMPLETED 9/28/2017
4. ALL MONUMENTS SHOWN AS FOUND VISITED 9/2017.



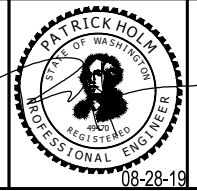
MATCH A-LINE 20+00
SEE SHEET THIS SHEET

MATCH A-LINE 20+00
SEE SHEET THIS SHEET

Aug 28, 2019 4:12:28pm - User: kens.melvin - User: kens.melvin
 N:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238-05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738-05-AL-T.DWG

Δ	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH	N. MAYFIELD	JOB No.: 0738.05
				CHECKED BY: P. HOLM	DRAWING FILE No.: 0738.05-AL-T

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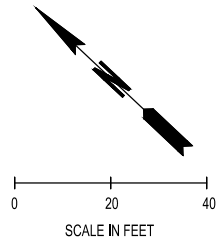
SCJ ALLIANCE
 CONSULTING SERVICES
 8730 TALLON LANE NE, SUITE 200, LACEY, WASHINGTON 98516
 P: 360-352-1465 F: 360-352-1509
 SCJALLIANCE.COM

PROJECT NAME:


MASON TRANSIT AUTHORITY
 BELFAIR
 SR-3 AND LOG YARD RD INTERSECTION
 HORIZONTAL ALIGNMENT

DRAWING No.: AL-1
 SHEET No.: 2 OF 52

T. 23 N., R. 01 W., S. 21, W.M.



ALIGNMENT LEGEND

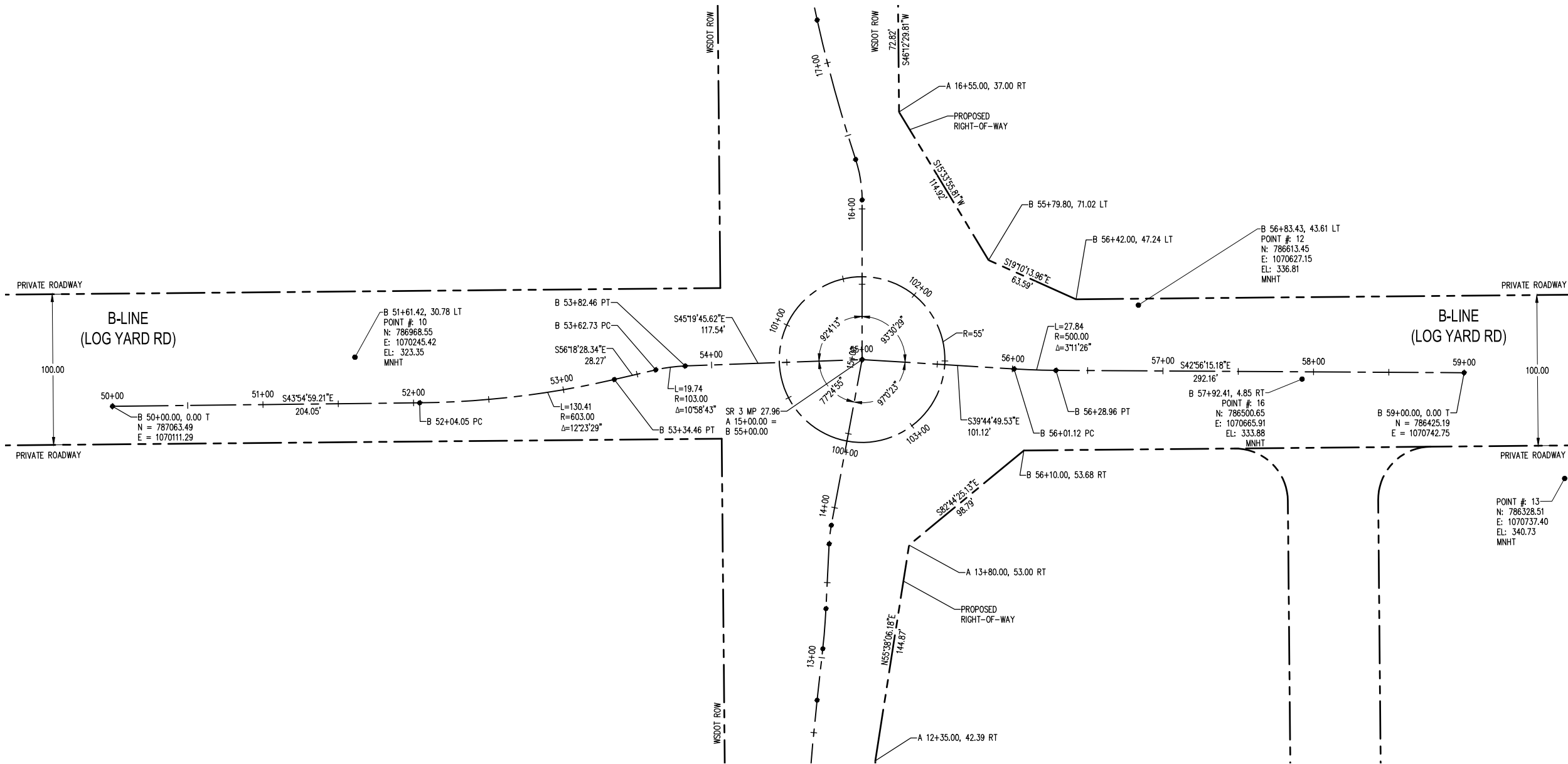
- PROPERTY LINE/RIGHT-OF-WAY
- - - PROPOSED RIGHT-OF-WAY
- BRASS CAP
- SURVEY MARKER

DATUM

HORIZONTAL - WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 83/2011 BASED ON TIES TO WSDOT MON 4599.
 VERTICAL - NAVD 88 BASED ON TIES TO WSDOT MONUMENT 4599, ELEVATION 298.73.

SURVEY NOTES

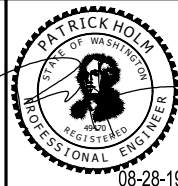
1. INSTRUMENT USED: SOKKIA SRX 3 TOTAL STATION AND TOPCON GR5 GPS.
2. THIS SURVEY MEETS OR EXCEEDS THE STANDARDS OF WAC 332-130-090
3. SURVEY COMPLETED 9/28/2017
4. ALL MONUMENTS SHOWN AS FOUND VISITED 9/2017.



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1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH	N. MAYFIELD	JOB No.: 0738.05
				P. HOLM	DRAWING FILE No.: 0738.05-AL-T

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED



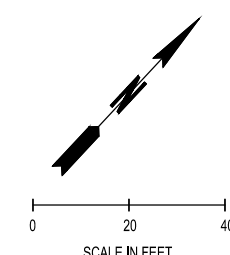
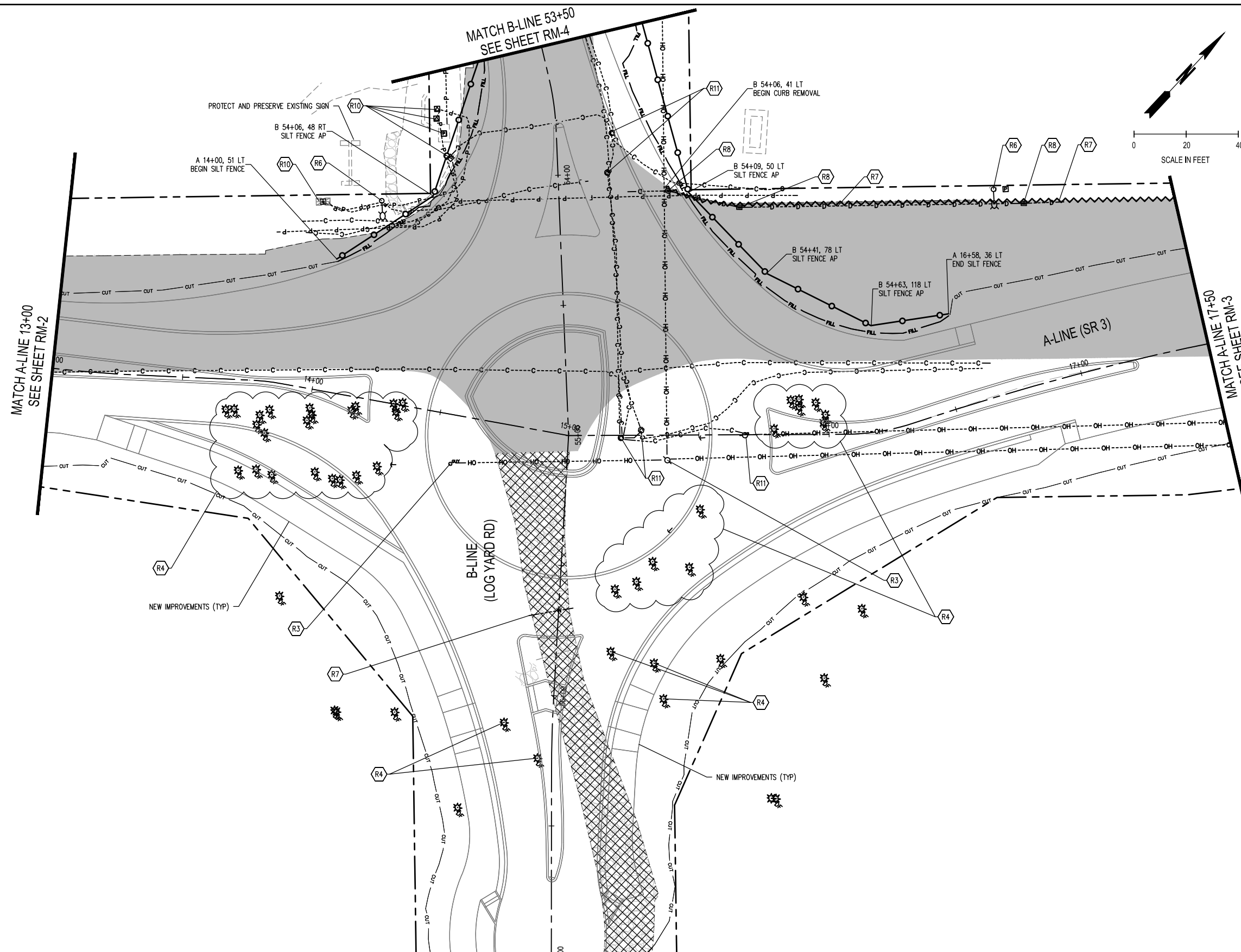
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 CONSULTING SERVICES
 8730 TALLON LANE NE, SUITE 200, LACEY, WASHINGTON 98516
 P: 360-352-1465 F: 360-352-1509
 SCJALLIANCE.COM

PROJECT NAME: 

MASON TRANSIT AUTHORITY
 BELFAIR
 SR-3 AND LOG YARD RD INTERSECTION
 HORIZONTAL ALIGNMENT

DRAWING No.: AL-2
 SHEET No.: 3 OF 52

Aug 28, 2019 4:11:02pm - User: kono.melvin
 N:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-RM-1.DWG



- ### REMOVAL LEGEND
- SAWCUT
 - ASPHALT CONCRETE REMOVAL
 - PLANING BITUMINOUS PAVEMENT (SEE DETAIL ON XS-1)
 - GRAVEL REMOVAL
 - REMOVE CURB AND GUTTER
 - SILT FENCE
 - WSDOT STD PLAN I-30.10
 - PAVEMENT MARKING REMOVAL
 - CUT LINE
 - FILL LINE
- ### REMOVAL NOTES
- R1 PROTECT AND PRESERVE COMMUNICATION PEDESTAL
 - R2 SEE STORM PLANS FOR CATCH BASIN ADJUSTMENT
 - R3 MASON PUD 3 TO PERFORM POWER RELOCATIONS. CONTRACTOR TO NOTIFY MASON PUD 3 SIX WEEKS IN ADVANCE OF ANTICIPATED RELOCATION.
 - R4 REMOVE TREE AND STUMP, BACKFILL WITH GRANULAR MATERIAL
 - R5 REMOVE CURB
 - R6 REMOVE LUMINAIRE. SEE SPECIAL PROVISIONS FOR SALVAGE.
 - R7 REMOVE STORM DRAINAGE PIPE
 - R8 PROTECT AND PRESERVE DRAINAGE STRUCTURE
 - R9 PROTECT AND PRESERVE EXISTING CONCRETE JERSEY BARRIER
 - R10 PROTECT AND PRESERVE POWER EQUIPMENT
 - R11 CENTURYLINK TO RELOCATE/ADJUST COMMUNICATIONS FACILITIES. CONTRACTOR TO NOTIFY CENTURYLINK THREE WEEKS IN ADVANCE OF ANTICIPATED RELOCATION.

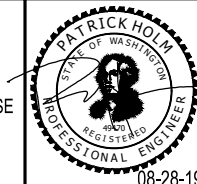
- ### LINE TYPES
- STORM LINE
 - SANITARY SEWER LINE
 - BURIED TELEPHONE
 - OVERHEAD TELEPHONE
 - BURIED POWER
 - OVERHEAD POWER
 - WATER LINE
 - NATURAL GAS LINE
 - BURIED CABLE TV LINE

- ### LEGEND (UTILITIES)
- CABLE RISER/ PEDESTAL
 - CABLE VAULT/MANHOLE
 - CULVERT
 - LUMINAIRE WITH ARM
 - NATURAL GAS MARKER POST
 - NATURAL GAS METER
 - NATURAL GAS VALVE
 - POWER CONDUIT
 - GUY ANCHOR
 - GUY POLE
 - POWER JUNCTION BOX
 - POWER MARKER POST
 - POWER METER
 - POWER POLE
 - PP WITH DROP LINE
 - PP WITH DROP AND LIGHT
 - PP WITH DROP, LIGHT AND TRANSFORMER
 - POWER TRANSFORMER
 - POWER VAULT/ MANHOLE
 - TELEPHONE CABINET
 - TELEPHONE JUNCTION BOX
 - TELEPHONE RISER
 - TELEPHONE MARKER POST
 - TELEPHONE VAULT/MANHOLE
 - WATER AIR RELEASE VALVE
 - WATER BLOW OFF
 - FIRE DEPARTMENT CONNECTION
 - HOSE BIB
 - IRRIGATION CONTROL VALVE
 - WATER MARKER POST
 - WATER METER
 - WATER POST INDICATOR VALVE
 - SPRINKLER HEAD
 - WATER VALVE
 - WATER FIRE HYDRANT
 - WATER VAULT/MANHOLE
 - WELL
 - STORM CATCH BASIN
 - STORM MANHOLE
 - STORM YARD DRAIN

Δ	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH		

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CHECKED BY: P. HOLM	DRAWING FILE No.: 0738.05-RM-T

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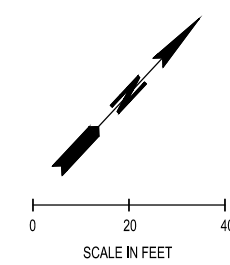
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PROJECT NAME:

MASON TRANSIT AUTHORITY
 BELFAIR
 SR-3 AND LOG YARD RD INTERSECTION

REMOVAL AND TESC PLANS

DRAWING No.: RM-1
 SHEET No.: 4 OF 52



REMOVAL LEGEND

- SAWCUT
- ASPHALT CONCRETE REMOVAL
- PLANING BITUMINOUS PAVEMENT (SEE DETAIL ON XS-1)
- GRAVEL REMOVAL
- REMOVE CURB AND GUTTER
- SILT FENCE WSDOT STD PLAN I-30.10
- PAVEMENT MARKING REMOVAL
- CUT LINE
- FILL LINE

REMOVAL NOTES

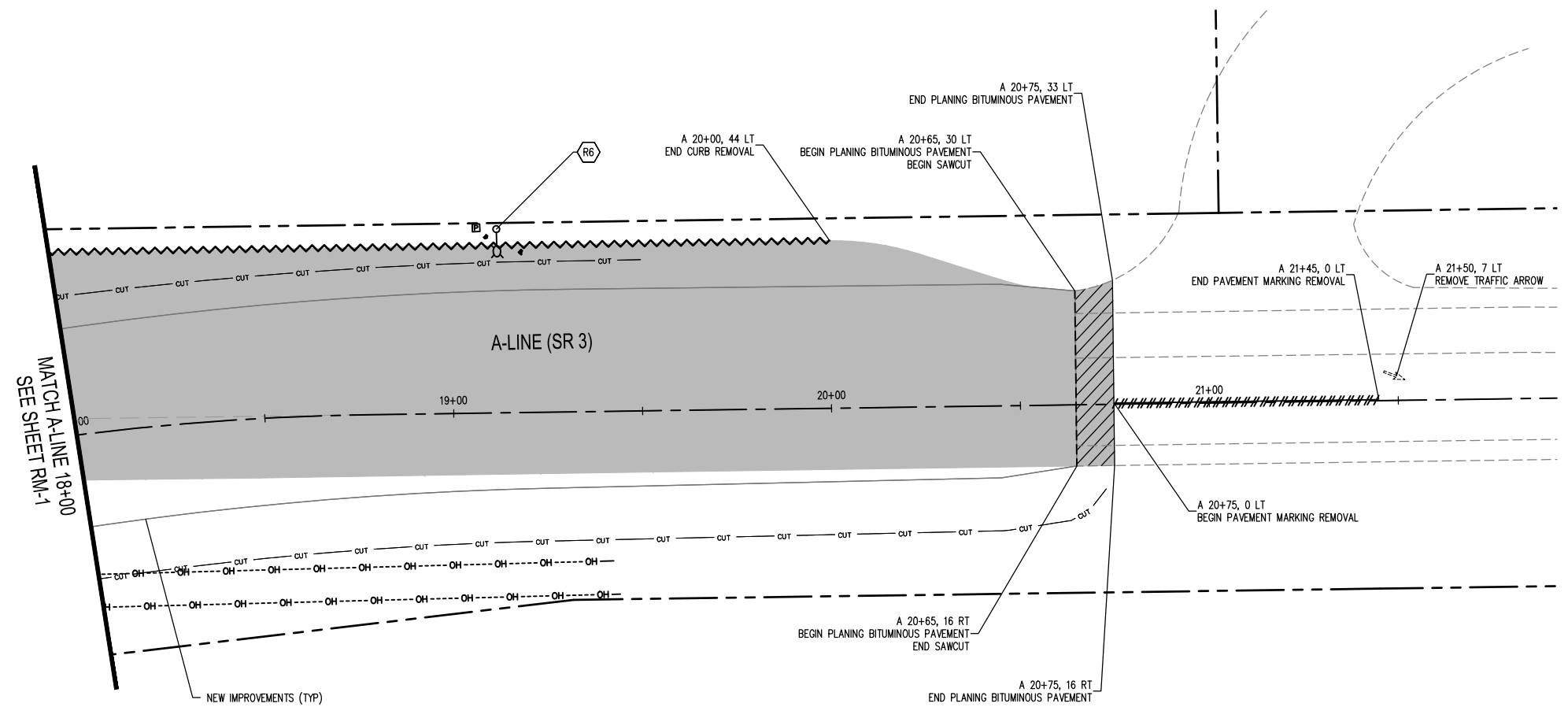
- R1 PROTECT AND PRESERVE COMMUNICATION PEDESTAL
- R2 SEE STORM PLANS FOR CATCH BASIN ADJUSTMENT
- R3 MASON PUD 3 TO PERFORM POWER RELOCATIONS. CONTRACTOR TO NOTIFY MASON PUD 3 SIX WEEKS IN ADVANCE OF ANTICIPATED RELOCATION.
- R4 REMOVE TREE AND STUMP, BACKFILL WITH GRANULAR MATERIAL
- R5 REMOVE CURB
- R6 REMOVE LUMINAIRE. SEE SPECIAL PROVISIONS FOR SALVAGE.
- R7 REMOVE STORM DRAINAGE PIPE
- R8 PROTECT AND PRESERVE DRAINAGE STRUCTURE
- R9 PROTECT AND PRESERVE EXISTING CONCRETE JERSEY BARRIER
- R10 PROTECT AND PRESERVE POWER EQUIPMENT
- R11 CENTURYLINK TO RELOCATE/ADJUST COMMUNICATIONS FACILITIES. CONTRACTOR TO NOTIFY CENTURYLINK THREE WEEKS IN ADVANCE OF ANTICIPATED RELOCATION.

LINE TYPES

- D---D---D---D--- STORM LINE
- SS---SS---SS--- SANITARY SEWER LINE
- T---T---T---T--- BURIED TELEPHONE
- SD---SD---SD--- OVERHEAD TELEPHONE
- P---P---P---P--- BURIED POWER
- OH---OH---OH---OH--- OVERHEAD POWER
- W---W---W---W--- WATER LINE
- G---G---G---G--- NATURAL GAS LINE
- C---C---C---C--- BURIED CABLE TV LINE

LEGEND (UTILITIES)

- CABLE RISER/ PEDESTAL
- CABLE VAULT/MANHOLE
- CULVERT
- LUMINAIRE WITH ARM
- NATURAL GAS MARKER POST
- NATURAL GAS METER
- NATURAL GAS VALVE
- POWER CONDUIT
- GUY ANCHOR
- GUY POLE
- POWER JUNCTION BOX
- POWER MARKER POST
- POWER METER
- POWER POLE
- PP WITH DROP LINE
- PP WITH DROP AND LIGHT
- PP WITH DROP, LIGHT AND TRANSFORMER
- POWER TRANSFORMER
- POWER VAULT/ MANHOLE
- TELEPHONE CABINET
- TELEPHONE JUNCTION BOX
- TELEPHONE RISER
- TELEPHONE MARKER POST
- TELEPHONE VAULT/MANHOLE
- WATER AIR RELEASE VALVE
- WATER BLOW OFF
- FIRE DEPARTMENT CONNECTION
- HOSE BIB
- IRRIGATION CONTROL VALVE
- WATER MARKER POST
- WATER METER
- WATER POST INDICATOR VALVE
- SPRINKLER HEAD
- WATER VALVE
- WATER FIRE HYDRANT
- WATER VAULT/MANHOLE
- WELL
- STORM CATCH BASIN
- STORM MANHOLE
- STORM YARD DRAIN



MATCH A-LINE 18+00
SEE SHEET RM-1

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1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
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3	FPS #3	08/28/19	PH	N. MAYFIELD	JOB No.: 0738.05
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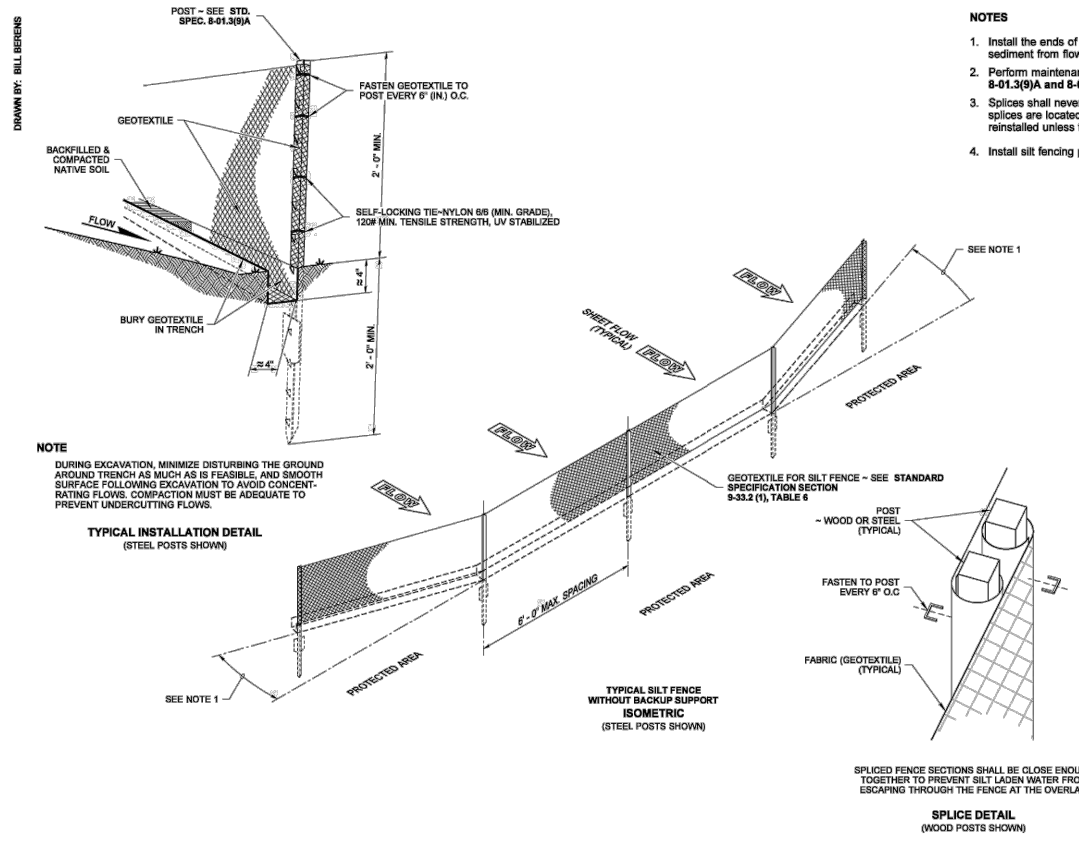
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PROJECT NAME:



MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION
REMOVAL AND TESC PLANS

DRAWING No.: **RM-3**
SHEET No.: **6** OF **52**

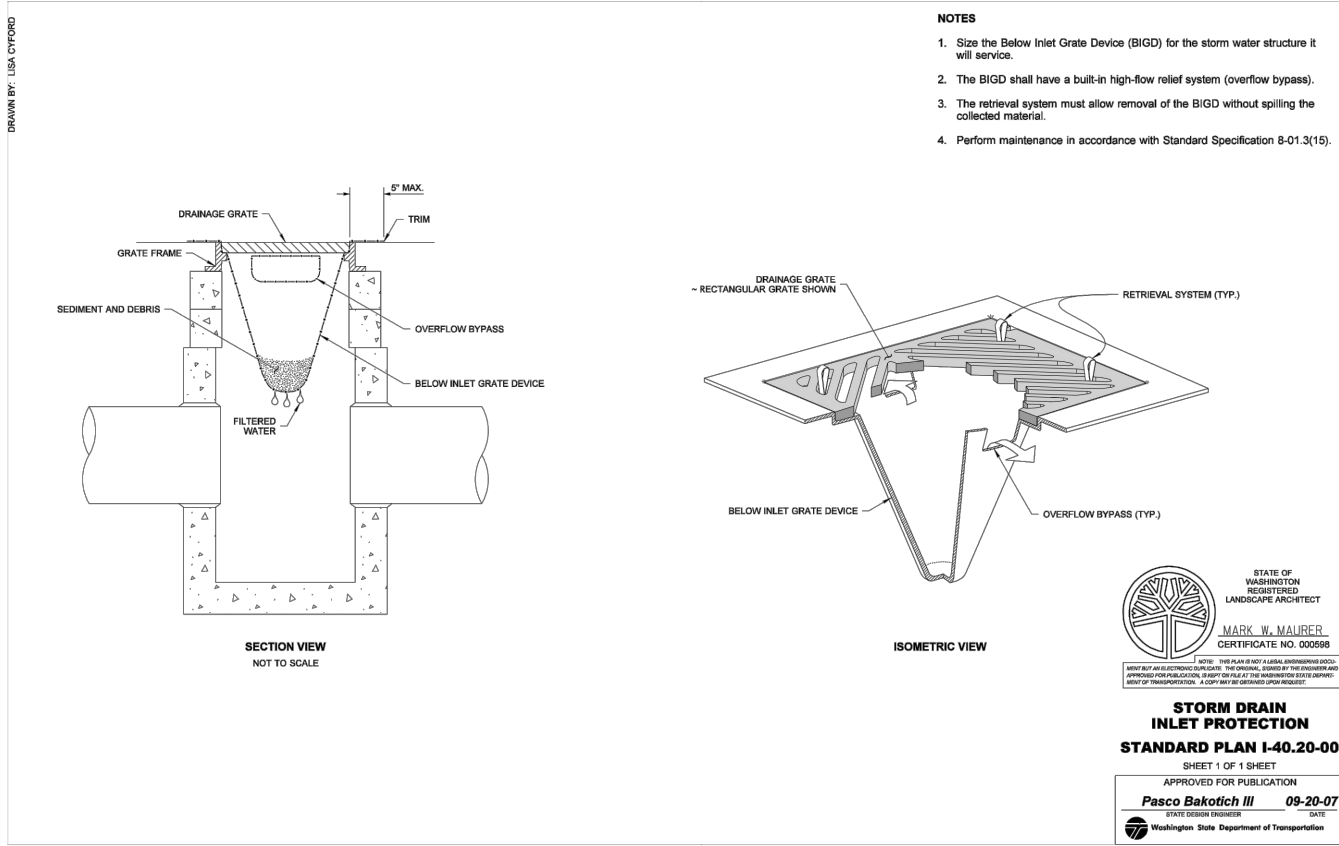


- NOTES**
1. Install the ends of the silt fence to point slightly upslope to prevent sediment from flowing around the ends of the fence.
 2. Perform maintenance in accordance with **Standard Specifications 8-01.3(9)A and 8-01.3(15)**.
 3. Splices shall never be placed in low spots or sump locations. If splices are located in low or sump areas, the fence may need to be reinstalled unless the Project Engineer approves the installation.
 4. Install silt fencing parallel to mapped contour lines.

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
SANDRA L. SALISBURY
CERTIFICATE NO. 0002660

SILT FENCE
STANDARD PLAN I-30.15-02
SHEET 1 OF 1 SHEET

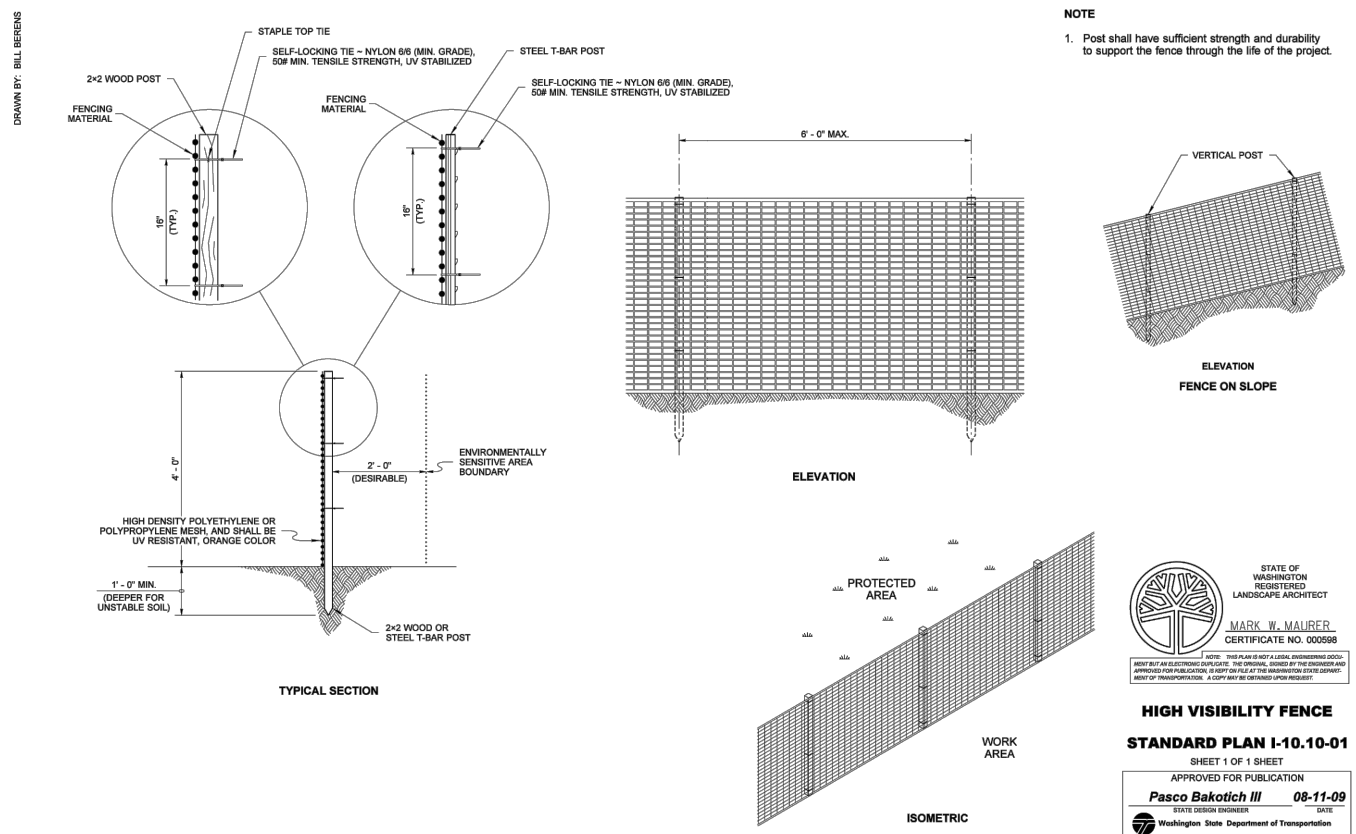
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Pasco Bakotich III 3/22/13
STATE DESIGN ENGINEER DATE
Washington State Department of Transportation



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MARK W. MAJUREK
CERTIFICATE NO. 0002598

STORM DRAIN INLET PROTECTION
STANDARD PLAN I-40.20-00
SHEET 1 OF 1 SHEET

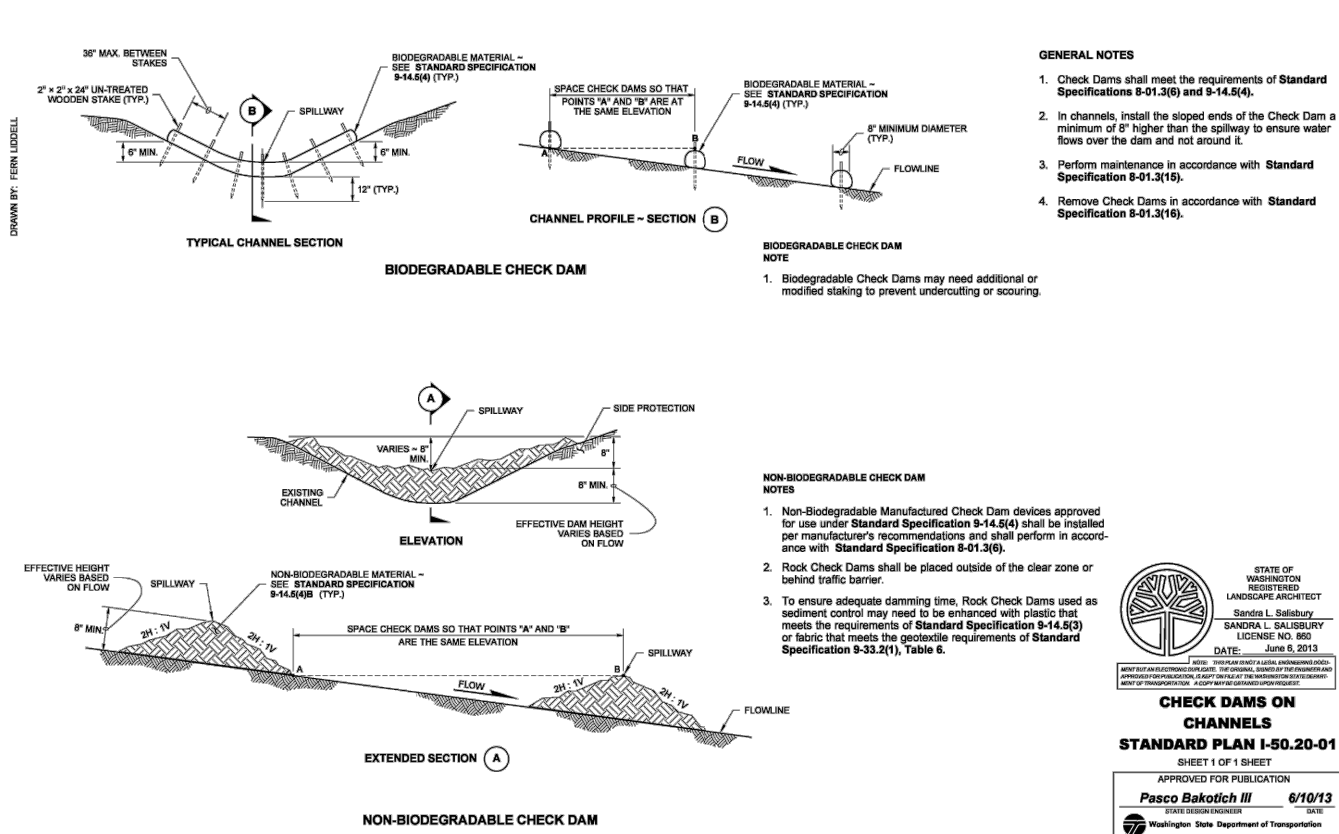
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Pasco Bakotich III 09-20-07
STATE DESIGN ENGINEER DATE
Washington State Department of Transportation



STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
MARK W. MAJUREK
CERTIFICATE NO. 0002598

HIGH VISIBILITY FENCE
STANDARD PLAN I-10.10-01
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III 08-11-09
STATE DESIGN ENGINEER DATE
Washington State Department of Transportation



STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
Sandra L. Salisbury
LICENSE NO. 860
DATE: June 5, 2013

CHECK DAMS ON CHANNELS
STANDARD PLAN I-50.20-01
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
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1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
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3	FPS #3	08/28/19	PH	N. MAYFIELD	0738.05

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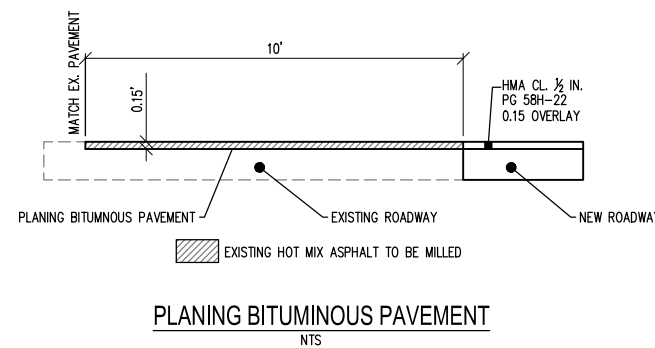
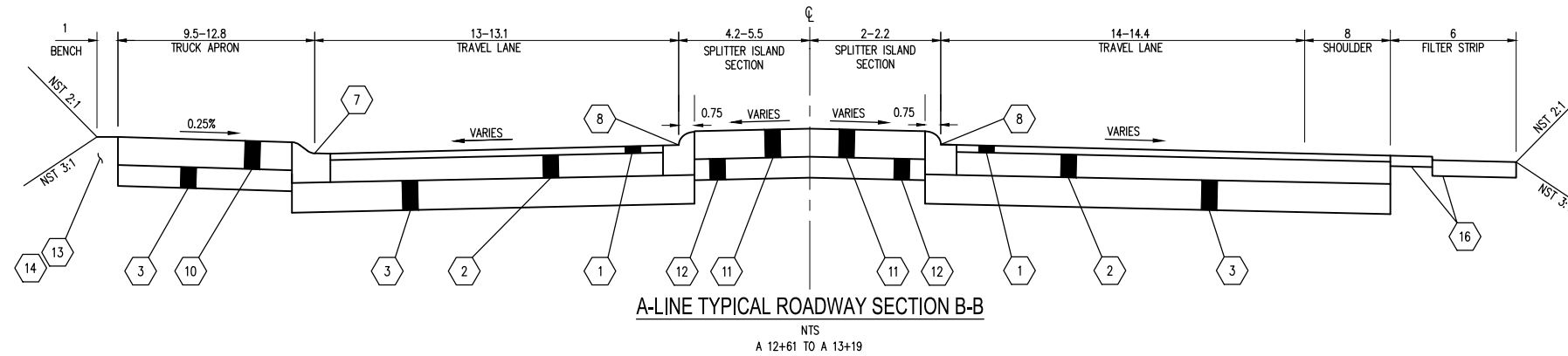
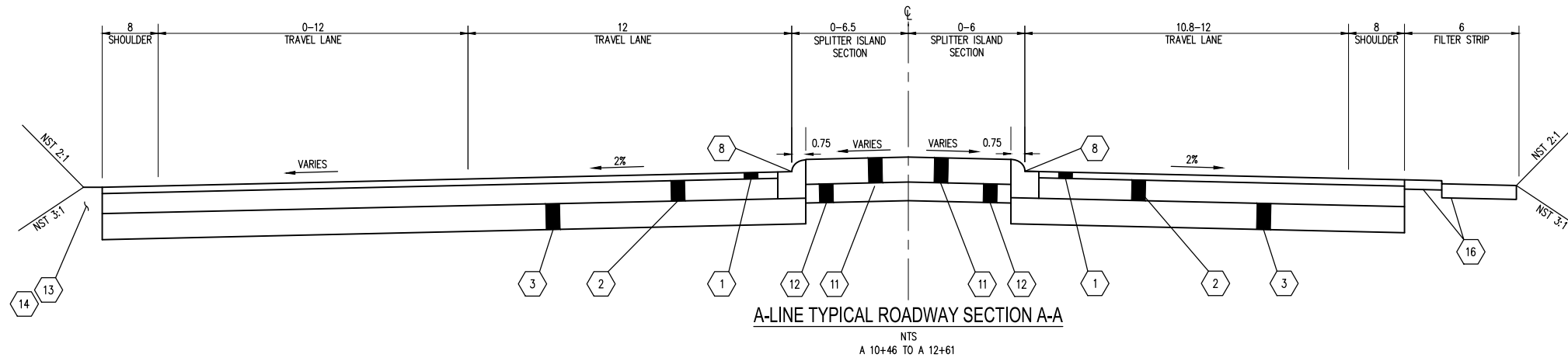
PATRICK HOLM
STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
08-28-19

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PROJECT NAME:

MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION
EROSION CONTROL DETAILS

DRAWING No.: RM-6
SHEET No.: 9 OF 52



ROADWAY SECTION KEY NOTES:

- 1 0.15' HMA CLASS 1/2" PG. 58H-22 (TYPICAL).
- 2 0.55' HMA CLASS 1/2" PG. 58H-22 (TYPICAL).
- 3 0.70' CRUSHED SURFACING BASE COURSE (CSBC).
- 4 CEMENT CONCRETE SIDEWALK (PER WSDOT STANDARD PLAN F-30.10).
- 5 0.17' CRUSHED SURFACING BASE COURSE (CSBC).
- 6 CURB 1 (2" MOD) ROUNDABOUT TRUCK APRON CEMENT CONCRETE CURB & GUTTER (SEE DETAIL, SHEET XS-5).
- 7 CURB 1 ROUNDABOUT TRUCK APRON CEMENT CONCRETE CURB & GUTTER (PER WSDOT STANDARD PLAN F-10.18).
- 8 CURB 2 ROUNDABOUT CEMENT CONCRETE CURB AND GUTTER (PER WSDOT STANDARD PLAN F-10.18).
- 9 CURB 3 ROUNDABOUT CENTRAL ISLAND CEMENT CONCRETE CURB (PER WSDOT STANDARD PLAN F-10.18).
- 10 0.85' CEMENT CONCRETE PAVEMENT (SEE DETAIL "B" SHEET XS-6).
- 11 0.67' CEMENT CONCRETE PAVEMENT (SEE DETAIL "A" SHEET XS-3).
- 12 0.50' CRUSHED SURFACING BASE COURSE (CSBC).
- 13 0.33' TOP SOIL, TYPE A.
- 14 SEEDING, FERTILIZING, AND MULCHING.
- 15 STAMPED COLORED CEMENT CONCRETE SIDEWALK (PER WSDOT STANDARD PLAN F-30.10, SEE SPECIAL PROVISIONS).
- 16 COMPOST-AMENDED VEGETATIVE FILTER STRIP (SEE DETAIL C, SHEET XS-6).

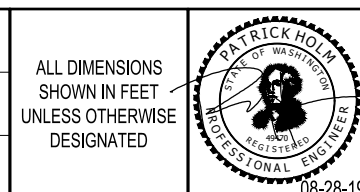
NOTES:

1. ALL SURFACING AND PAVING DEPTHS ARE COMPACTED DEPTHS
2. NST = NO STEEPER THAN
3. SEE SHEETS PP-1 TO PP-5 FOR SPOT ELEVATIONS AT FLOWLINE TO ESTABLISH CROSS SLOPES.
4. SEE STANDARD SPECIFICATION 5-04.3(7)A FOR HMA MIX DESIGN APPROVAL.
5. WHERE THE ENGINEER DETERMINES THAT THE EXISTING SUBGRADE CONTAINS FINE-GRAINED SOIL, A NON-WOVEN SEPARATION GEOTEXTILE SHALL BE USED THAT MEETS THE REQUIREMENTS OF STANDARD SPECIFICATION 9-33.

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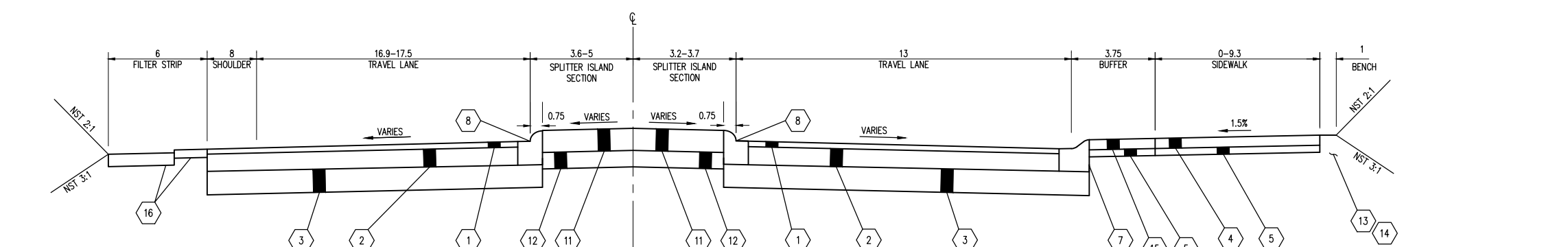
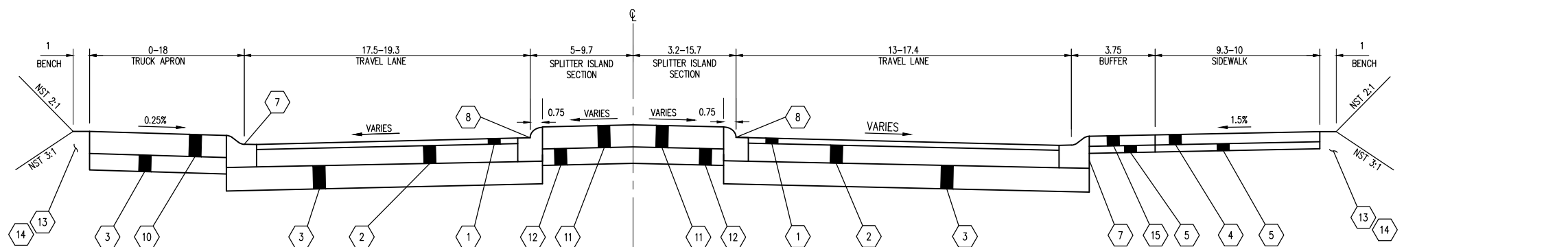
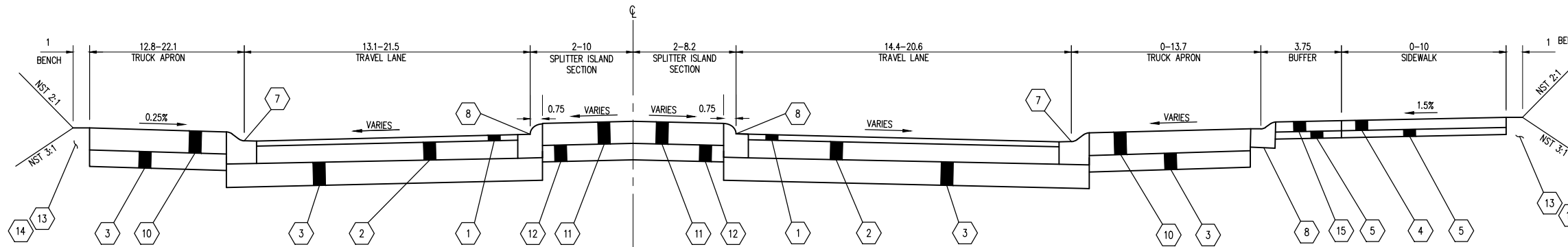
DRAWING No.: XS-1
SHEET No.: 10 OF 52

ROADWAY SECTION KEY NOTES:

- 1 0.15' HMA CLASS 1/2" PG. 58H-22 (TYPICAL).
- 2 0.55' HMA CLASS 1/2" PG. 58H-22 (TYPICAL).
- 3 0.70' CRUSHED SURFACING BASE COURSE (CSBC).
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- 13 0.33' TOP SOIL, TYPE A.
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- 15 STAMPED COLORED CEMENT CONCRETE SIDEWALK (PER WSDOT STANDARD PLAN F-30.10, SEE SPECIAL PROVISIONS).
- 16 COMPOST-AMENDED VEGETATIVE FILTER STRIP (SEE DETAIL C, SHEET XS-6).

NOTES:

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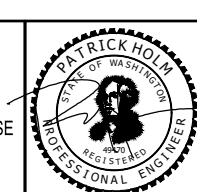


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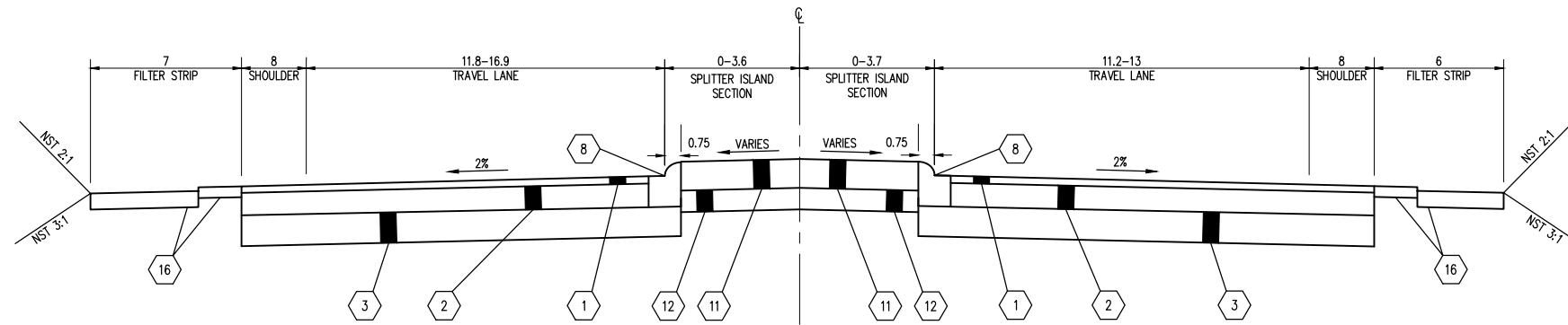


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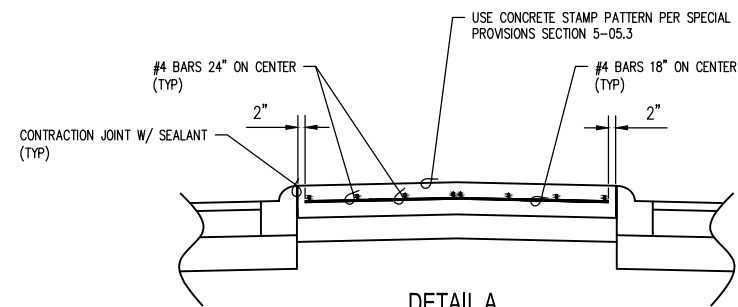
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BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

DRAWING No.: XS-2
SHEET No.: 11 OF 52



A-LINE TYPICAL ROADWAY SECTION F-F

NTS
A 16+93 TO A 20+65



DETAIL A
SPLITTER ISLAND SECTION
NTS

ROADWAY SECTION KEY NOTES:

- 1 0.15' HMA CLASS 1/2" PG. 58H-22 (TYPICAL).
- 2 0.55' HMA CLASS 1/2" PG. 58H-22 (TYPICAL).
- 3 0.70' CRUSHED SURFACING BASE COURSE (CSBC).
- 4 CEMENT CONCRETE SIDEWALK (PER WSDOT STANDARD PLAN F-30.10).
- 5 0.17' CRUSHED SURFACING BASE COURSE (CSBC).
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- 10 0.85' CEMENT CONCRETE PAVEMENT (SEE DETAIL "B" SHEET XS-6).
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- 13 0.33' TOP SOIL, TYPE A.
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- 15 STAMPED COLORED CEMENT CONCRETE SIDEWALK (PER WSDOT STANDARD PLAN F-30.10, SEE SPECIAL PROVISIONS).
- 16 COMPOST-AMENDED VEGETATIVE FILTER STRIP (SEE DETAIL C, SHEET XS-6).

NOTES:

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2. NST = NO STEEPER THAN
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5. WHERE THE ENGINEER DETERMINES THAT THE EXISTING SUBGRADE CONTAINS FINE-GRAINED SOIL, A NON-WOVEN SEPARATION GEOTEXTILE SHALL BE USED THAT MEETS THE REQUIREMENTS OF STANDARD SPECIFICATION 9-33.

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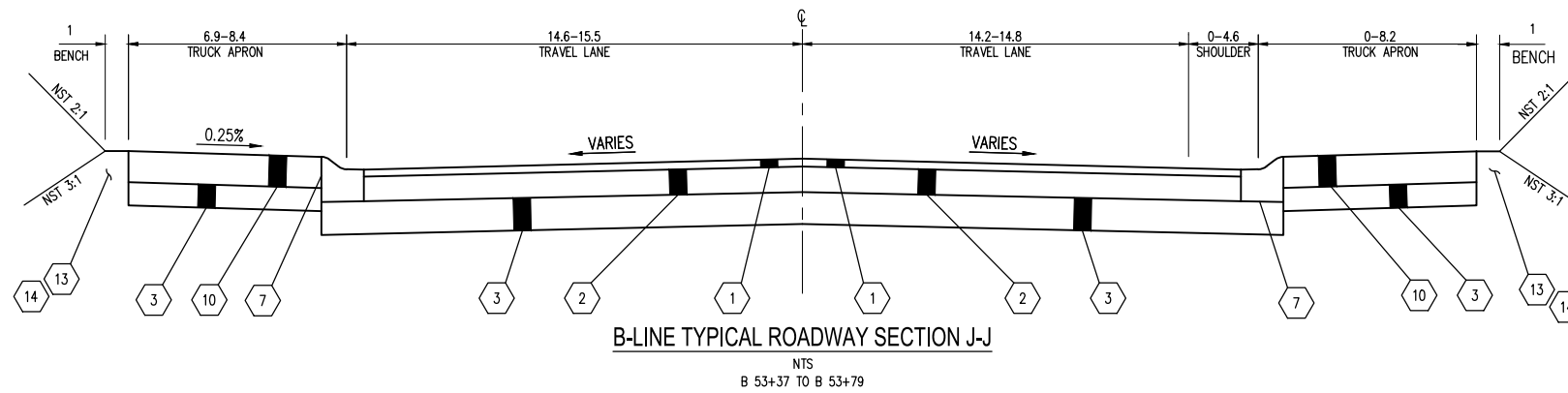
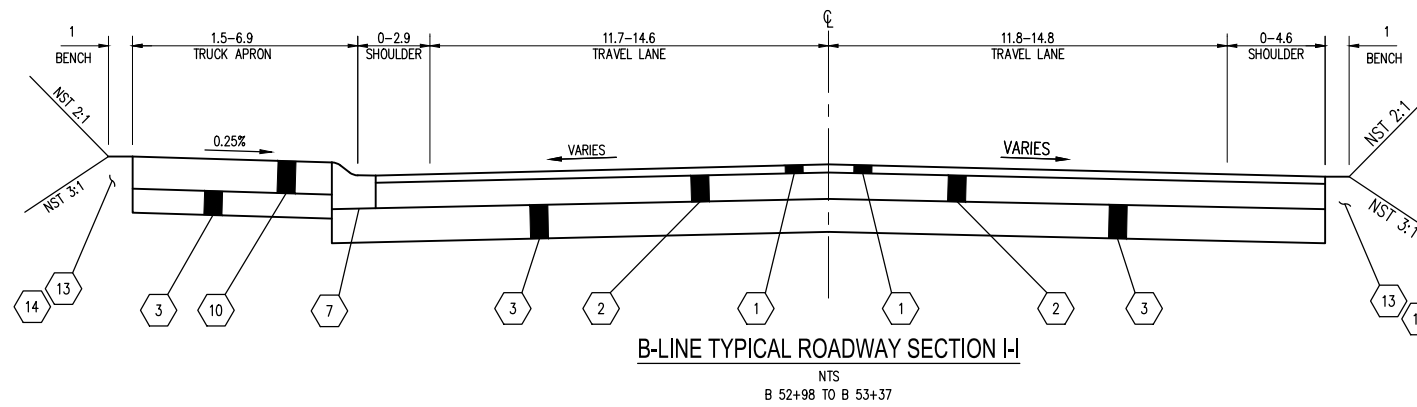
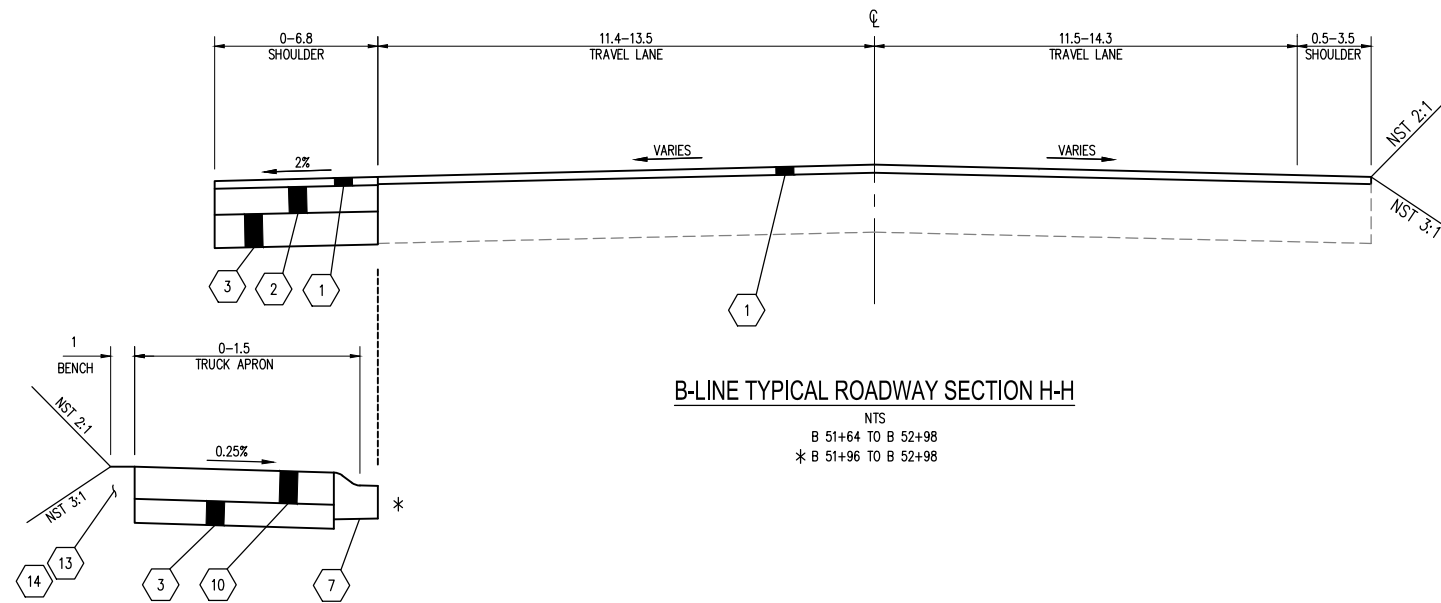
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ROADWAY TYPICAL SECTIONS

DRAWING No.: XS-3
SHEET No.: 12 OF 52



ROADWAY SECTION KEY NOTES:

- 1 0.15' HMA CLASS 1/2" PG. 58H-22 (TYPICAL).
- 2 0.55' HMA CLASS 1/2" PG. 58H-22 (TYPICAL).
- 3 0.70' CRUSHED SURFACING BASE COURSE (CSBC).
- 4 CEMENT CONCRETE SIDEWALK (PER WSDOT STANDARD PLAN F-30.10).
- 5 0.17' CRUSHED SURFACING BASE COURSE (CSBC).
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- 10 0.85' CEMENT CONCRETE PAVEMENT (SEE DETAIL "B" SHEET XS-6).
- 11 0.67' CEMENT CONCRETE PAVEMENT (SEE DETAIL "A" SHEET XS-3).
- 12 0.50' CRUSHED SURFACING BASE COURSE (CSBC).
- 13 0.33' TOP SOIL, TYPE A.
- 14 SEEDING, FERTILIZING, AND MULCHING.
- 15 STAMPED COLORED CEMENT CONCRETE SIDEWALK (PER WSDOT STANDARD PLAN F-30.10, SEE SPECIAL PROVISIONS).
- 16 COMPOST-AMENDED VEGETATIVE FILTER STRIP (SEE DETAIL C, SHEET XS-6).

NOTES:

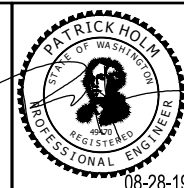
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- 4. SEE STANDARD SPECIFICATION 5-04.3(7)A FOR HMA MIX DESIGN APPROVAL.
- 5. WHERE THE ENGINEER DETERMINES THAT THE EXISTING SUBGRADE CONTAINS FINE-GRAINED SOIL, A NON-WOVEN SEPARATION GEOTEXTILE SHALL BE USED THAT MEETS THE REQUIREMENTS OF STANDARD SPECIFICATION 9-33.

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DRAWN BY:	N. MAYFIELD	JOB No.:	0738.05
CHECKED BY:	P. HOLM	DRAWING FILE No.:	0738.05-XS-T

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PROJECT NAME:

MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

ROADWAY TYPICAL SECTIONS

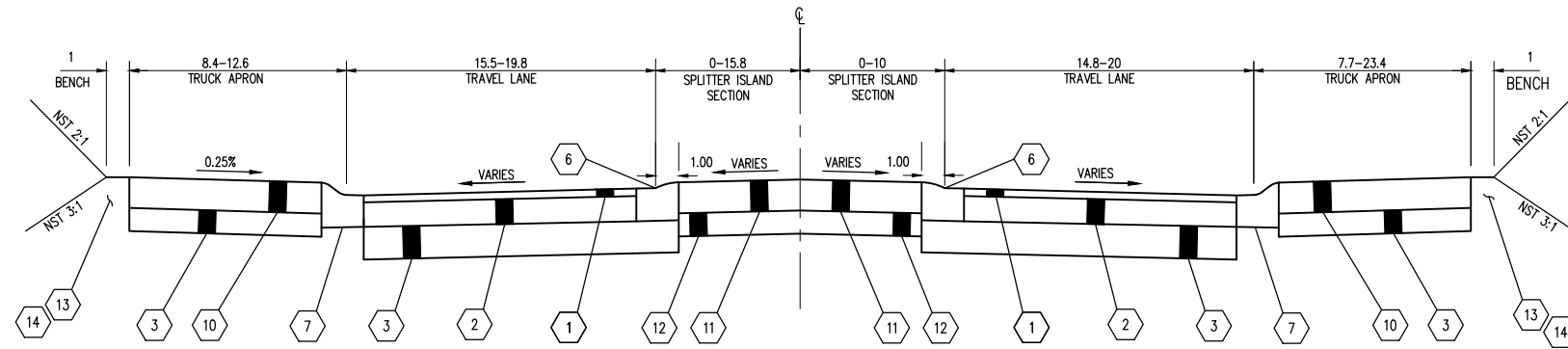
DRAWING No.: XS-4
SHEET No.: 13 OF 52

ROADWAY SECTION KEY NOTES:

- 1 0.15' HMA CLASS 1/2" PG. 58H-22 (TYPICAL).
- 2 0.55' HMA CLASS 1/2" PG. 58H-22 (TYPICAL).
- 3 0.70' CRUSHED SURFACING BASE COURSE (CSBC).
- 4 CEMENT CONCRETE SIDEWALK (PER WSDOT STANDARD PLAN F-30.10).
- 5 0.17' CRUSHED SURFACING BASE COURSE (CSBC).
- 6 CURB 1 (2" MOD) ROUNDABOUT TRUCK APRON CEMENT CONCRETE CURB & GUTTER (SEE DETAIL, SHEET XS-5).
- 7 CURB 1 ROUNDABOUT TRUCK APRON CEMENT CONCRETE CURB & GUTTER (PER WSDOT STANDARD PLAN F-10.18).
- 8 CURB 2 ROUNDABOUT CEMENT CONCRETE CURB AND GUTTER (PER WSDOT STANDARD PLAN F-10.18).
- 9 CURB 3 ROUNDABOUT CENTRAL ISLAND CEMENT CONCRETE CURB (PER WSDOT STANDARD PLAN F-10.18).
- 10 0.85' CEMENT CONCRETE PAVEMENT (SEE DETAIL "B" SHEET XS-6).
- 11 0.67' CEMENT CONCRETE PAVEMENT (SEE DETAIL "A" SHEET XS-3).
- 12 0.50' CRUSHED SURFACING BASE COURSE (CSBC).
- 13 0.33' TOP SOIL, TYPE A.
- 14 SEEDING, FERTILIZING, AND MULCHING.
- 15 STAMPED COLORED CEMENT CONCRETE SIDEWALK (PER WSDOT STANDARD PLAN F-30.10, SEE SPECIAL PROVISIONS).
- 16 COMPOST-AMENDED VEGETATIVE FILTER STRIP (SEE DETAIL C, SHEET XS-6).

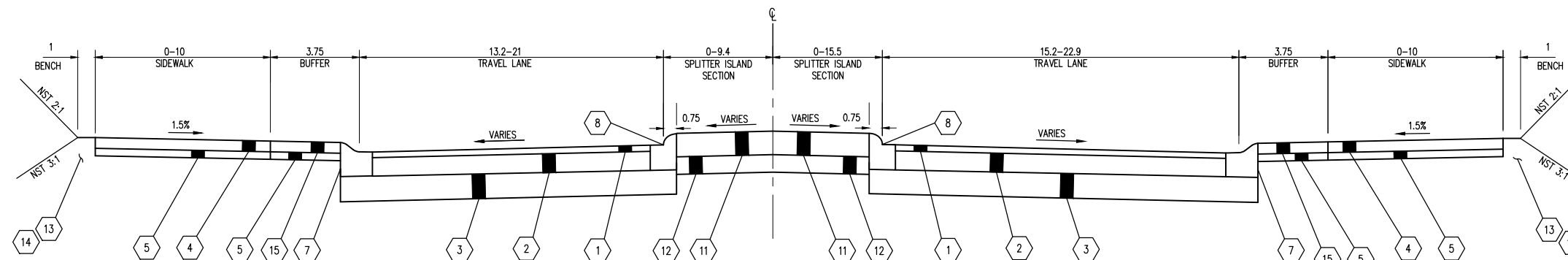
NOTES:

- 1. ALL SURFACING AND PAVING DEPTHS ARE COMPACTED DEPTHS
- 2. NST = NO STEEPER THAN
- 3. SEE SHEETS PP-1 TO PP-5 FOR SPOT ELEVATIONS AT FLOWLINE TO ESTABLISH CROSS SLOPES.
- 4. SEE STANDARD SPECIFICATION 5-04.3(7)A FOR HMA MIX DESIGN APPROVAL.
- 5. WHERE THE ENGINEER DETERMINES THAT THE EXISTING SUBGRADE CONTAINS FINE-GRAINED SOIL, A NON-WOVEN SEPARATION GEOTEXTILE SHALL BE USED THAT MEETS THE REQUIREMENTS OF STANDARD SPECIFICATION 9-33.



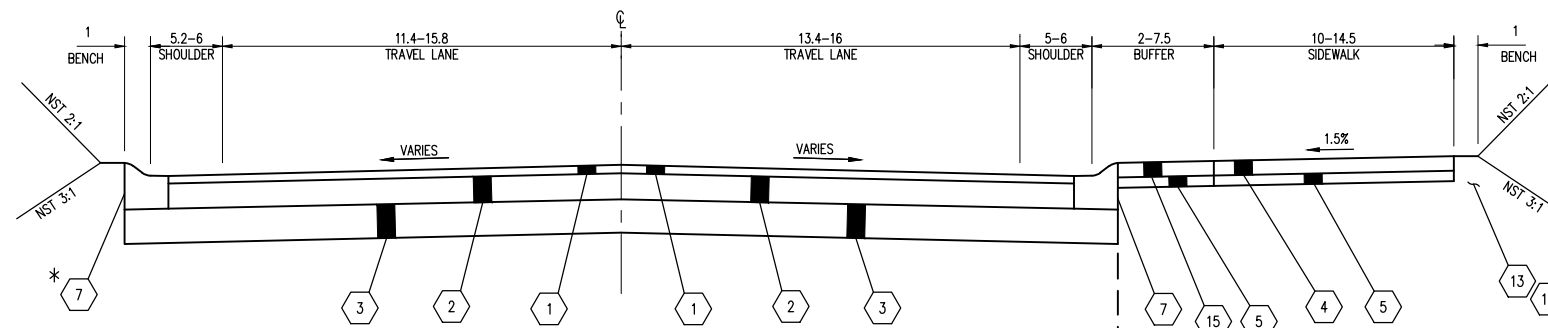
B-LINE TYPICAL ROADWAY SECTION K-K

NTS
B 53+79 TO 54+24



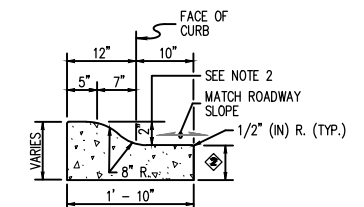
B-LINE TYPICAL ROADWAY SECTION L-L

NTS
B 55+77 TO 56+72



B-LINE TYPICAL ROADWAY SECTION M-M

NTS
A 56+72 TO A 57+24
* A 56+24 TO A 57+43



CURB 1 (2" MODIFIED)

ROUNDABOUT TRUCK APRON
CEMENT CONCRETE CURB & GUTTER
(ROLLED CURB)
PER WSDOT STANDARD PLAN F-10.18

Aug 28, 2019 4:12:16pm - User: kono.melvin
K:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-XS-1.DWG

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1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH	N. MAYFIELD	JOB No.: 0738.05
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MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

ROADWAY TYPICAL SECTIONS

DRAWING No.:

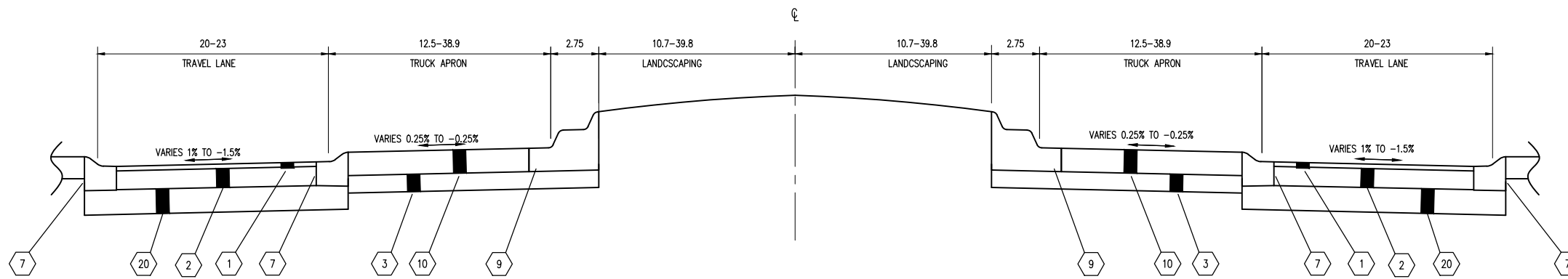
XS-5

SHEET No.:

14 OF 52

ROADWAY SECTION KEY NOTES:

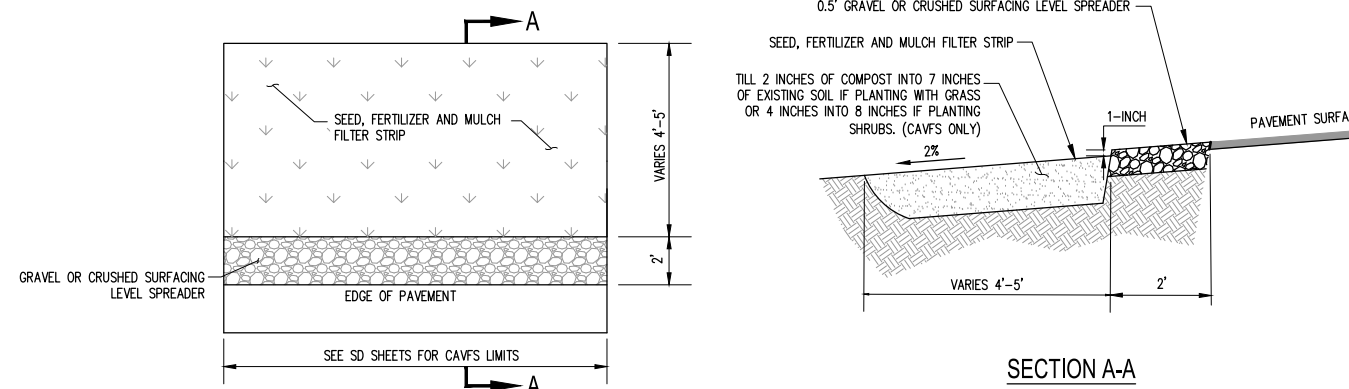
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- 15 STAMPED COLORED CEMENT CONCRETE SIDEWALK (PER WSDOT STANDARD PLAN F-30.10, SEE SPECIAL PROVISIONS).
- 16 COMPOST-AMENDED VEGETATIVE FILTER STRIP (SEE DETAIL C, SHEET XS-6).



ROUNDABOUT TYPICAL ROADWAY SECTION N-N
NTS
INTERSECTION OF A-LINE AND B-LINE

NOTES:

1. ALL SURFACING AND PAVING DEPTHS ARE COMPACTED DEPTHS
2. NST = NO STEEPER THAN
3. SEE SHEETS PP-1 TO PP-5 FOR SPOT ELEVATIONS AT FLOWLINE TO ESTABLISH CROSS SLOPES.
4. SEE STANDARD SPECIFICATION 5-04.3(7)A FOR HMA MIX DESIGN APPROVAL.
5. WHERE THE ENGINEER DETERMINES THAT THE EXISTING SUBGRADE CONTAINS FINE-GRAINED SOIL, A NON-WOVEN SEPARATION GEOTEXTILE SHALL BE USED THAT MEETS THE REQUIREMENTS OF STANDARD SPECIFICATION 9-33.



DETAIL C
COMPOST-AMENDED VEGETATIVE FILTER STRIP
NTS

SECTION A-A

Aug 28, 2019 4:12:21pm - User: keno.melvin
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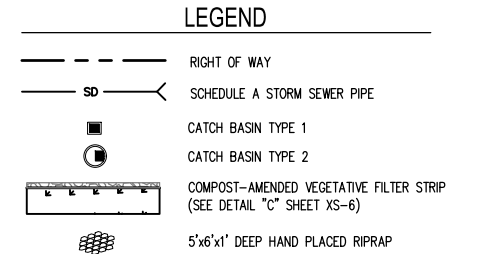
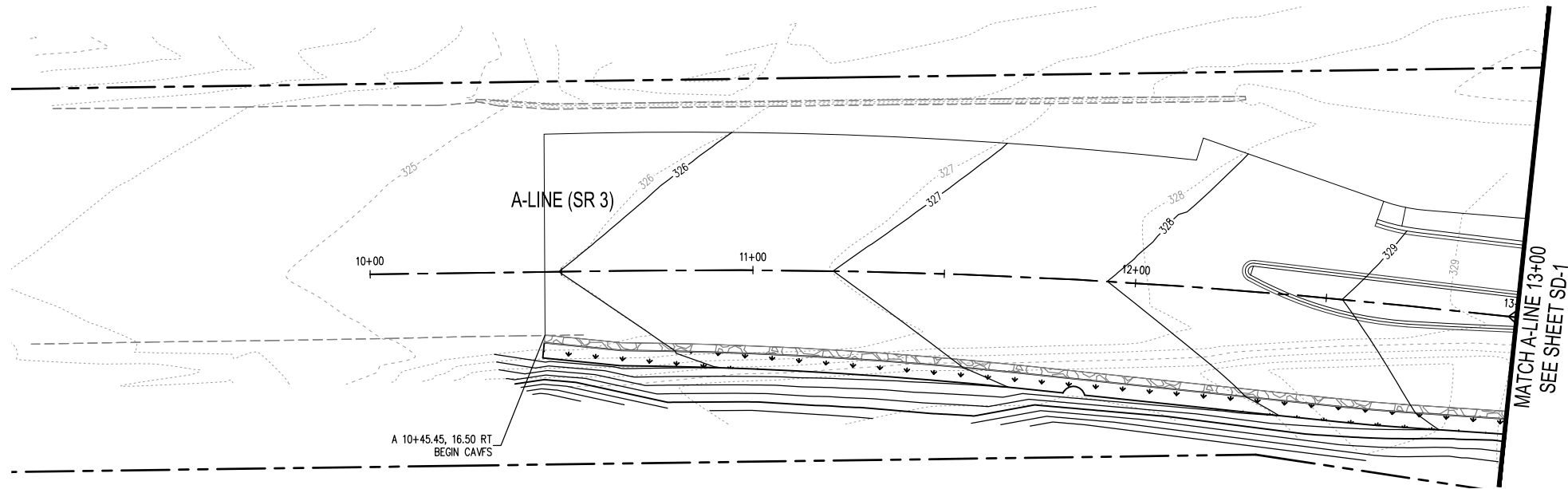
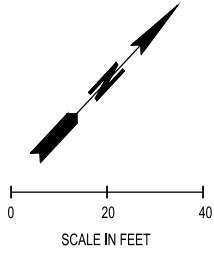
PROJECT NAME:

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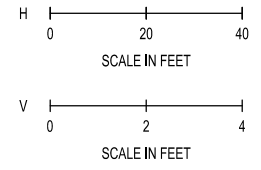
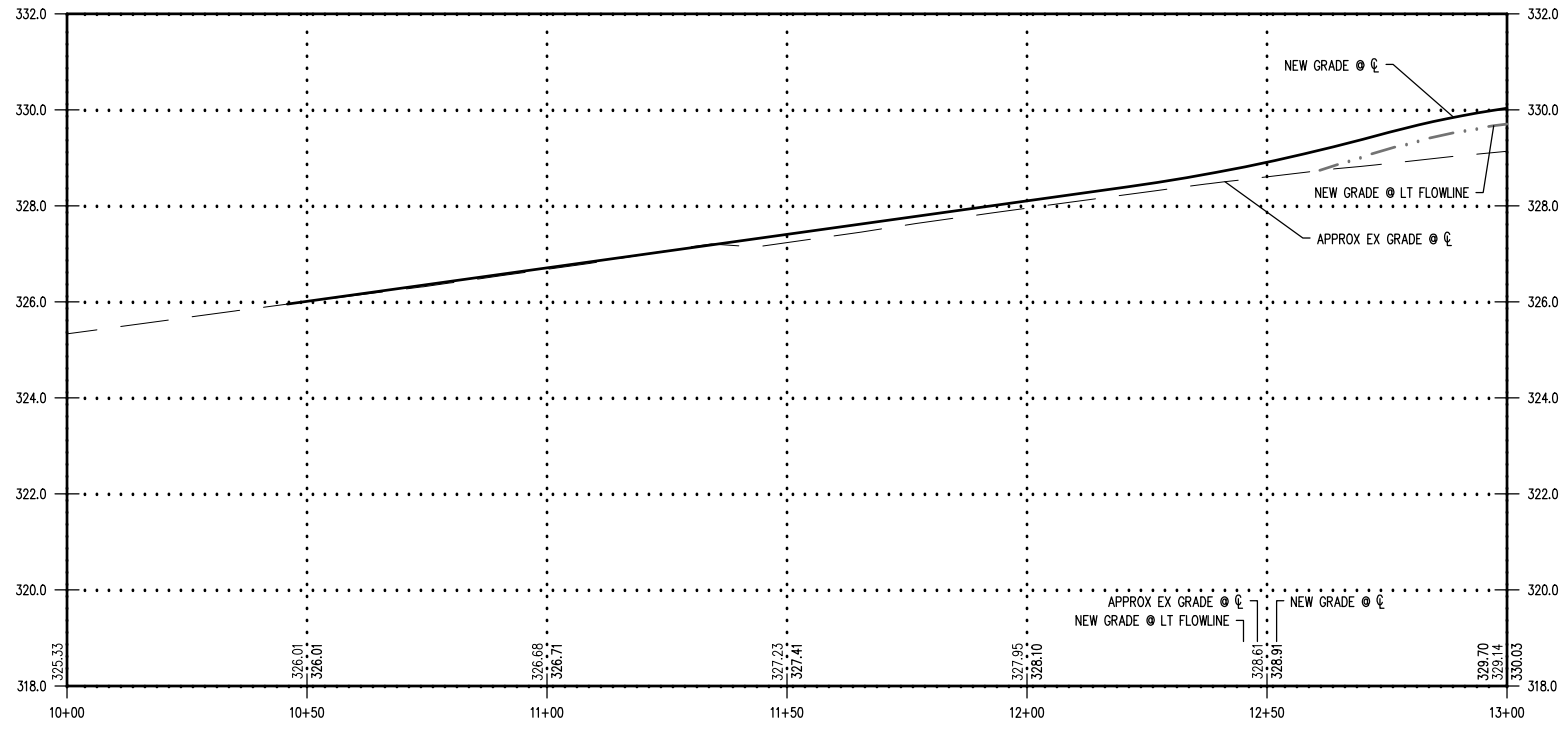
ROADWAY TYPICAL SECTIONS

DRAWING No.: XS-6
SHEET No.: 15 OF 52

T. 23 N., R. 01 W., S. 21, W.M.



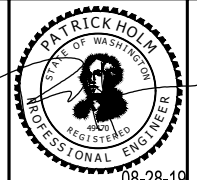
- GENERAL NOTES**
1. CATCH BASINS LOCATED ALONG THE CURB AND GUTTER ARE LOCATED (STATION, OFFSET, AND ELEVATION) IN RELATION TO FLOW LINE FACE OF CURB AT THE MIDPOINT BACK OF RIM. ALL OTHER CATCH BASINS ARE LOCATED TO CENTER OF STRUCTURE.
 2. ALL CATCH BASIN GRATES SHALL HAVE GRATES, PER WSDOT STANDARD PLAN B-30.30, UNLESS OTHERWISE NOTED.
 3. INSTALL CEMENT CONCRETE CURB AND GUTTER PAN, PER WSDOT STANDARD PLAN F-10.16, AT ALL CATCH BASINS LOCATED ALONG THE CURB AND GUTTER.



Aug 28, 2019 6:22:36pm - User: patrick.holm - N:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-SD-TDWG

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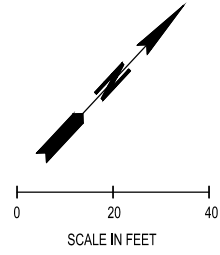
PROJECT NAME:

MASON TRANSIT AUTHORITY
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SR-3 AND LOG YARD RD INTERSECTION

STORM PLAN AND PROFILE

DRAWING No.: SD-2
SHEET No.: 17 OF 52

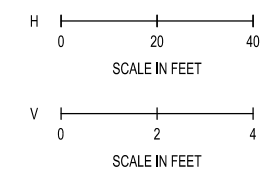
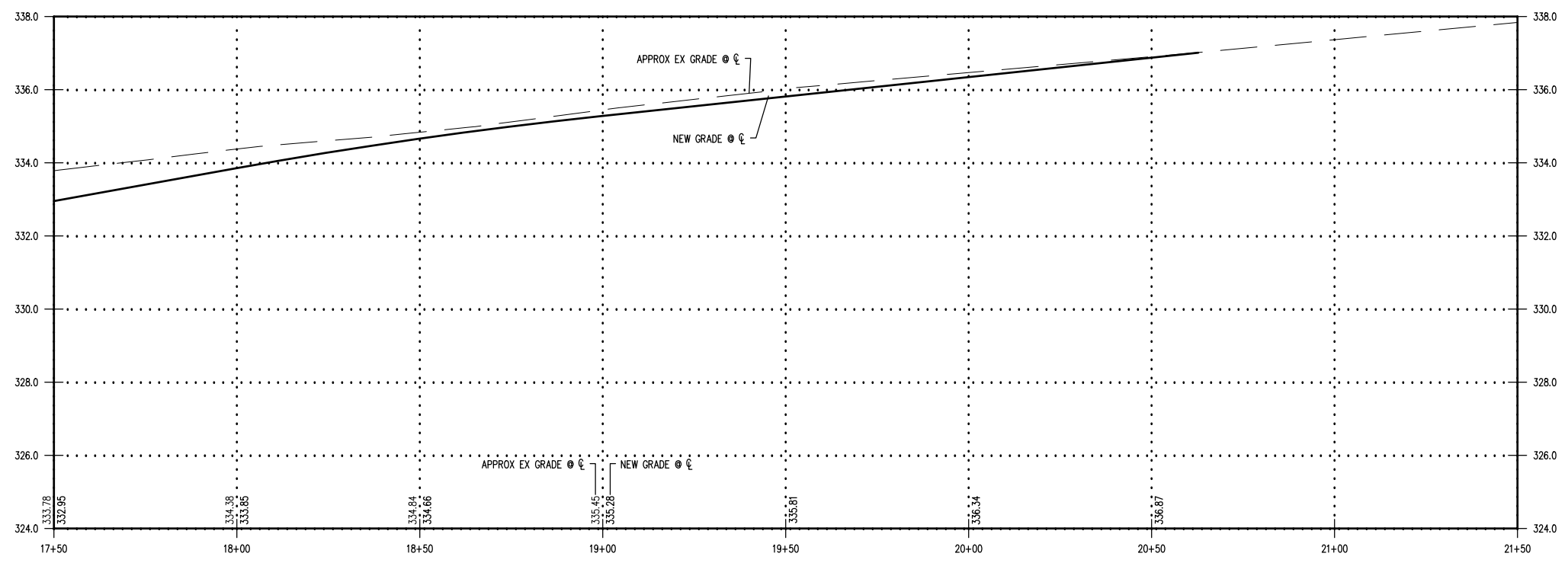
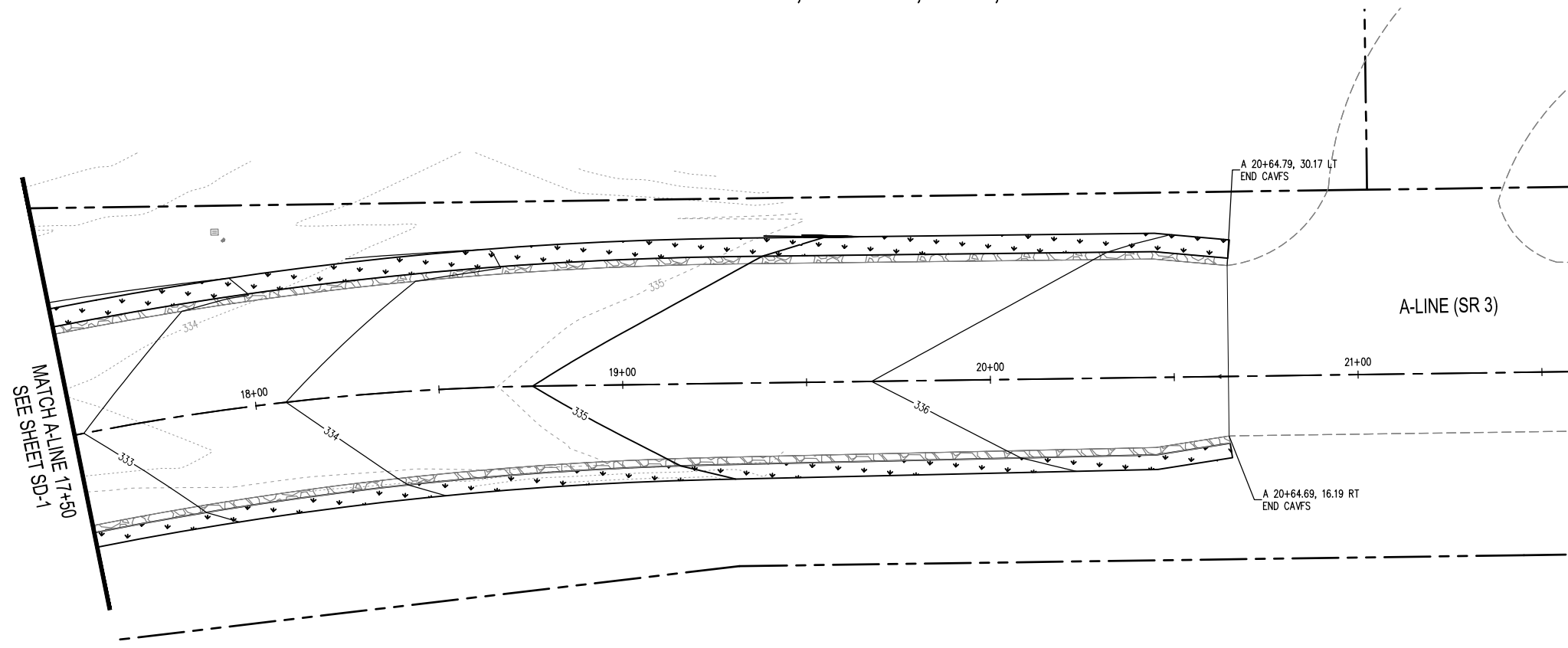
T. 23 N., R. 01 W., S. 21, W.M.



LEGEND

- RIGHT OF WAY
- SCHEDULE A STORM SEWER PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 2
- COMPOST-AMENDED VEGETATIVE FILTER STRIP (SEE DETAIL "C" SHEET XS-6)
- 5'x6'x1' DEEP HAND PLACED RIPRAP

- GENERAL NOTES**
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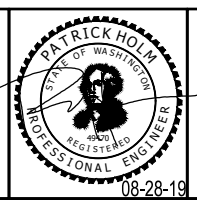


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1 FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
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DRAWN BY:	JOB No.:
N. MAYFIELD	0738.05
CHECKED BY:	DRAWING FILE No.:
P. HOLM	0738.05-SD-T

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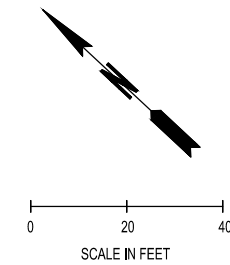
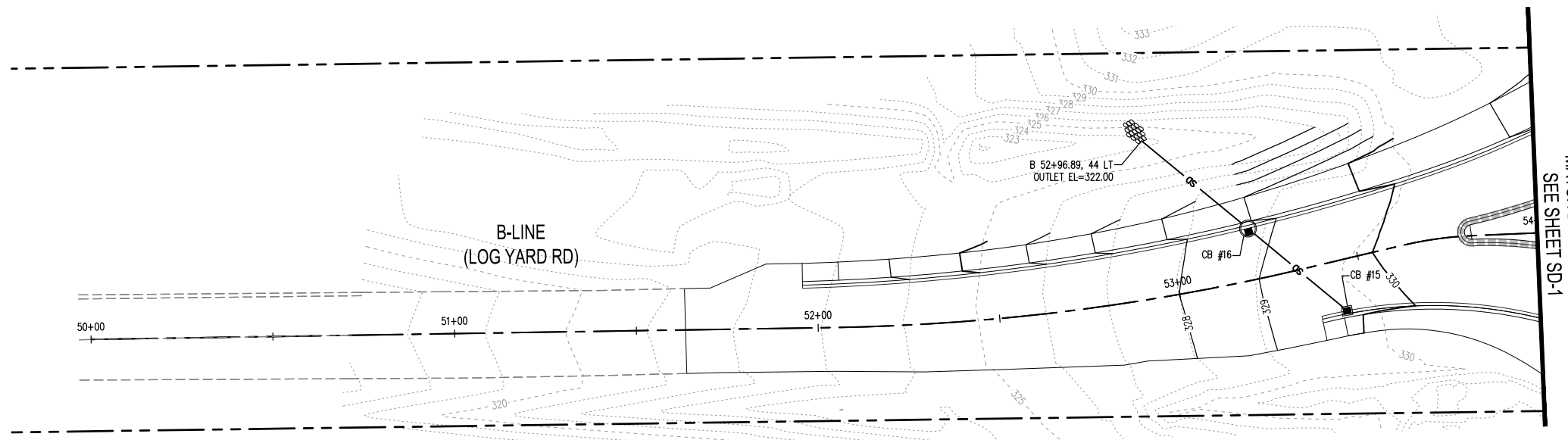
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STORM PLAN AND PROFILE

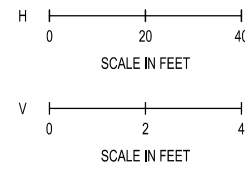
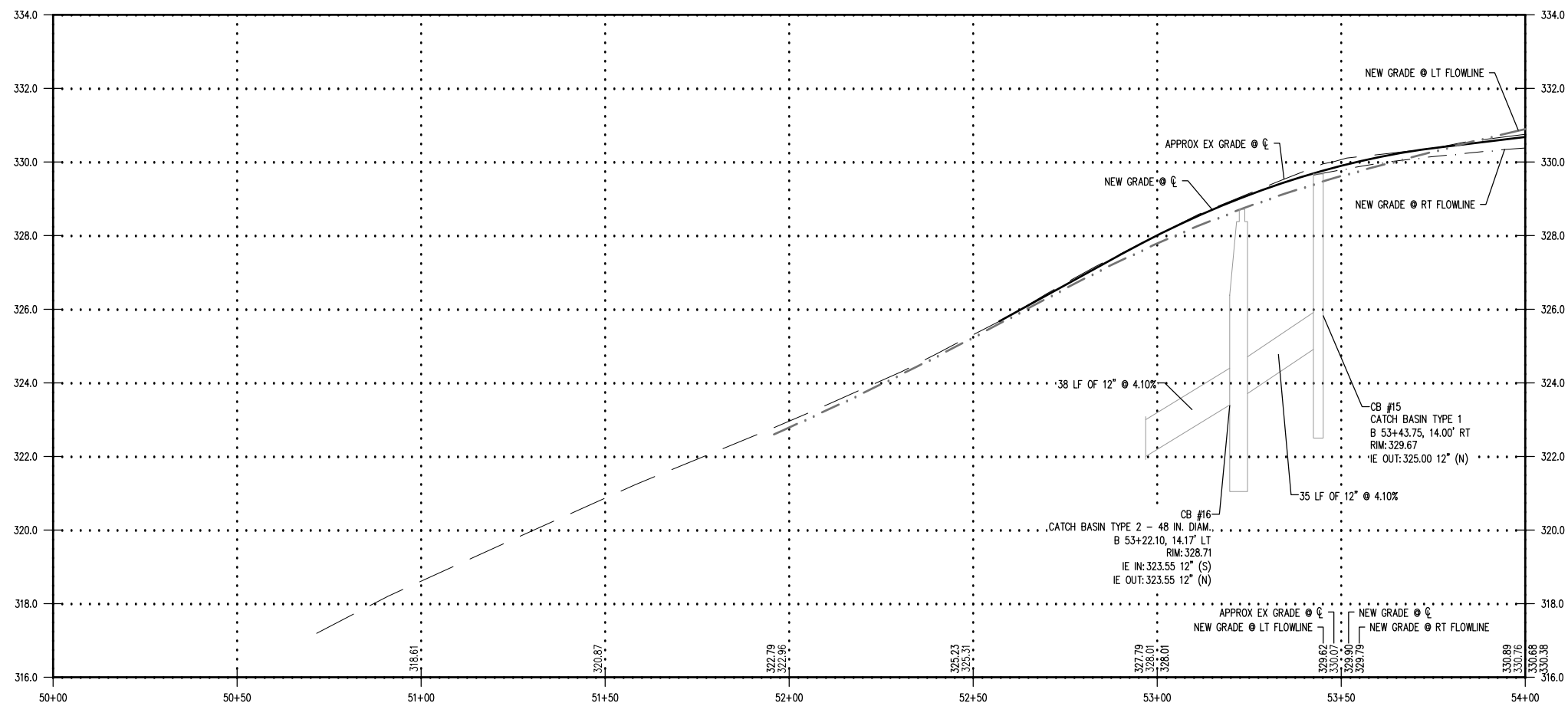
DRAWING No.: SD-3
SHEET No.: 18 OF 52

T. 23 N., R. 01 W., S. 21, W.M.



- LEGEND**
- RIGHT OF WAY
 - SCHEDULE A STORM SEWER PIPE
 - CATCH BASIN TYPE 1
 - CATCH BASIN TYPE 2
 - COMPOST-AMENDED VEGETATIVE FILTER STRIP (SEE DETAIL "C" SHEET XS-6)
 - 5'x6'x1' DEEP HAND PLACED RIPRAP

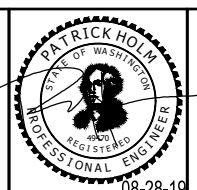
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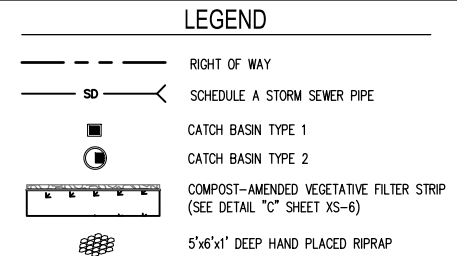
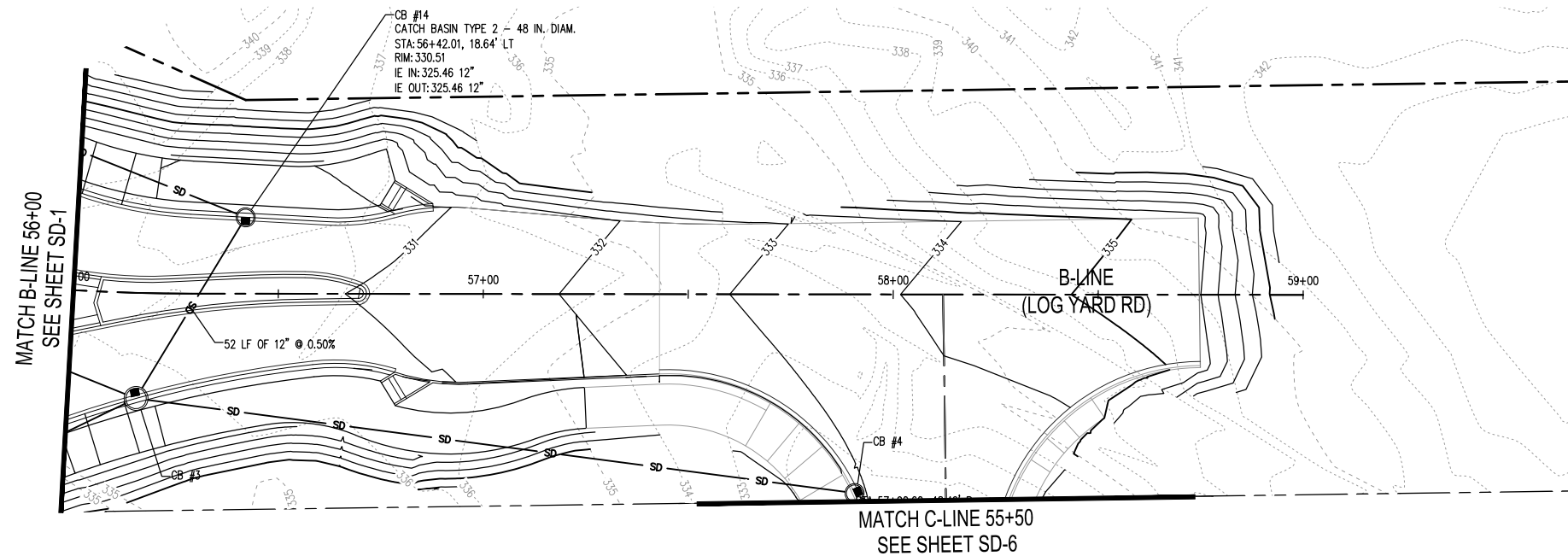
PROJECT NAME:

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DRAWING No.: SD-4
SHEET No.: 19 OF 52

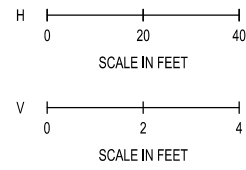
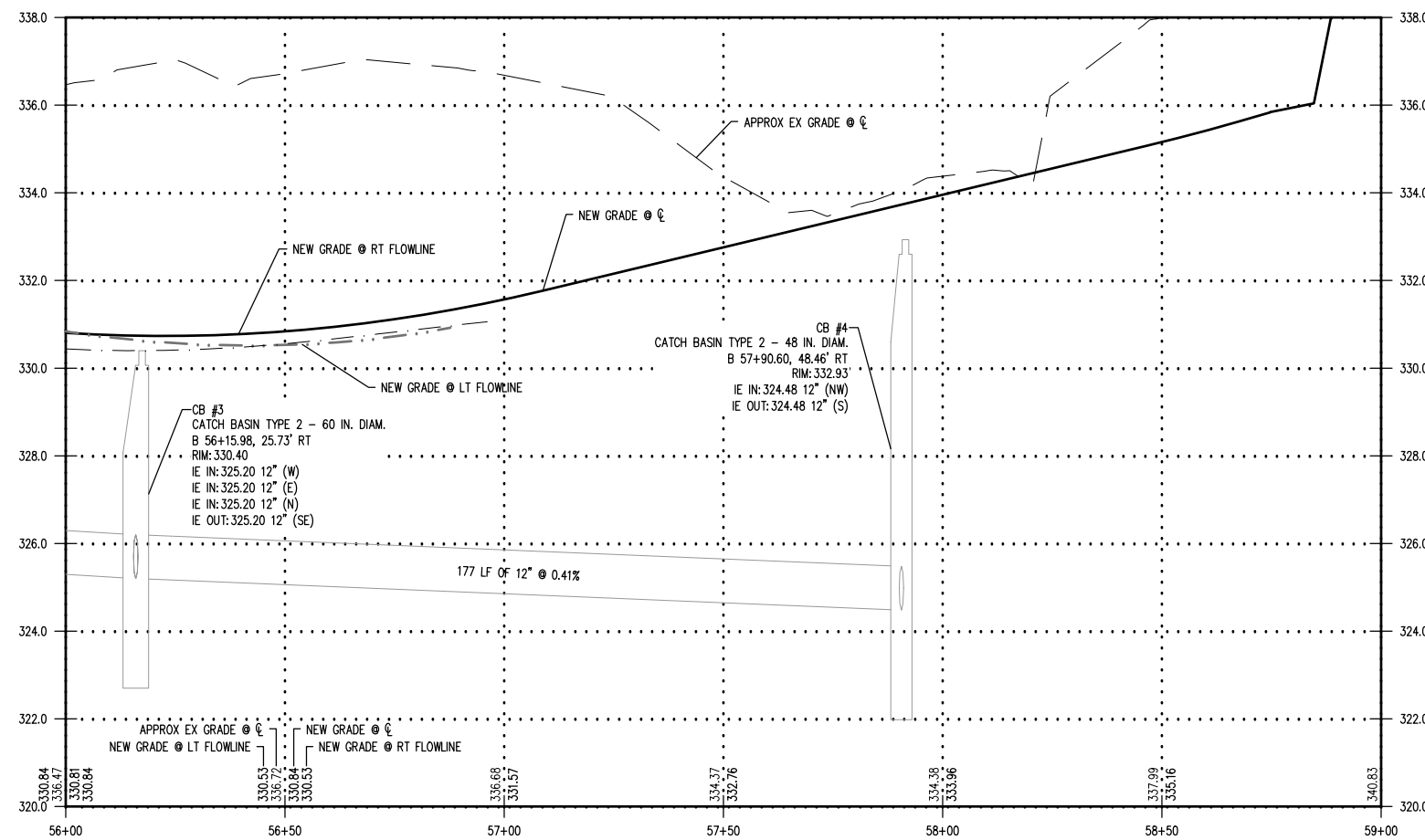
STORM PLAN AND PROFILE

T. 23 N., R. 01 W., S. 21, W.M.



GENERAL NOTES

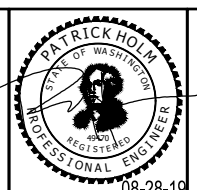
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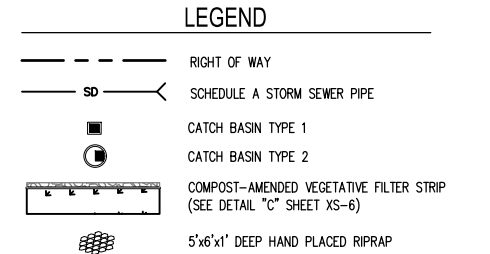
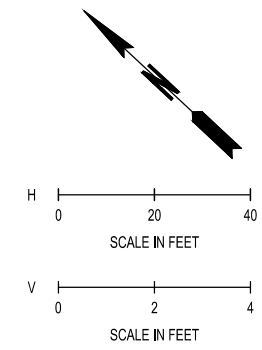
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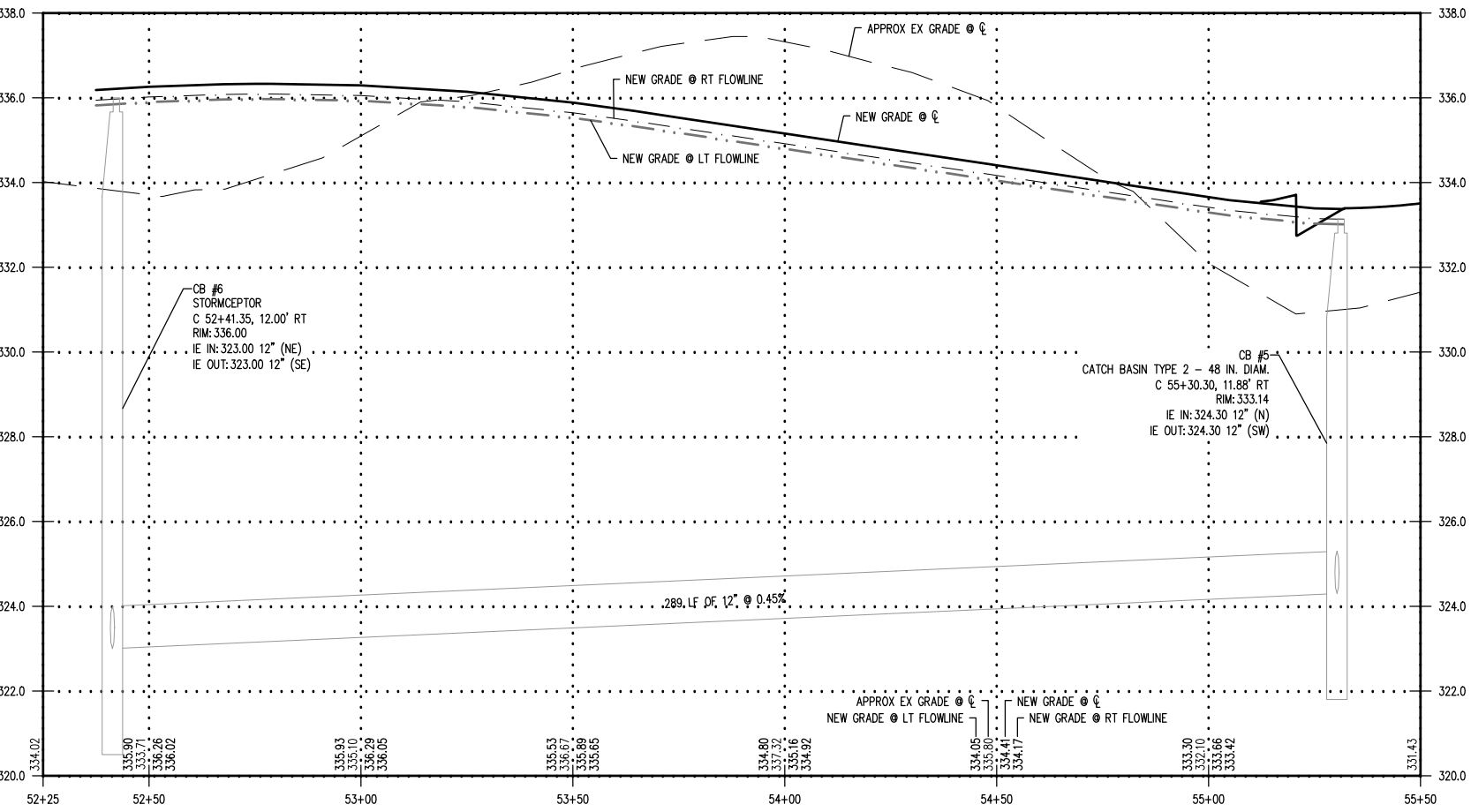
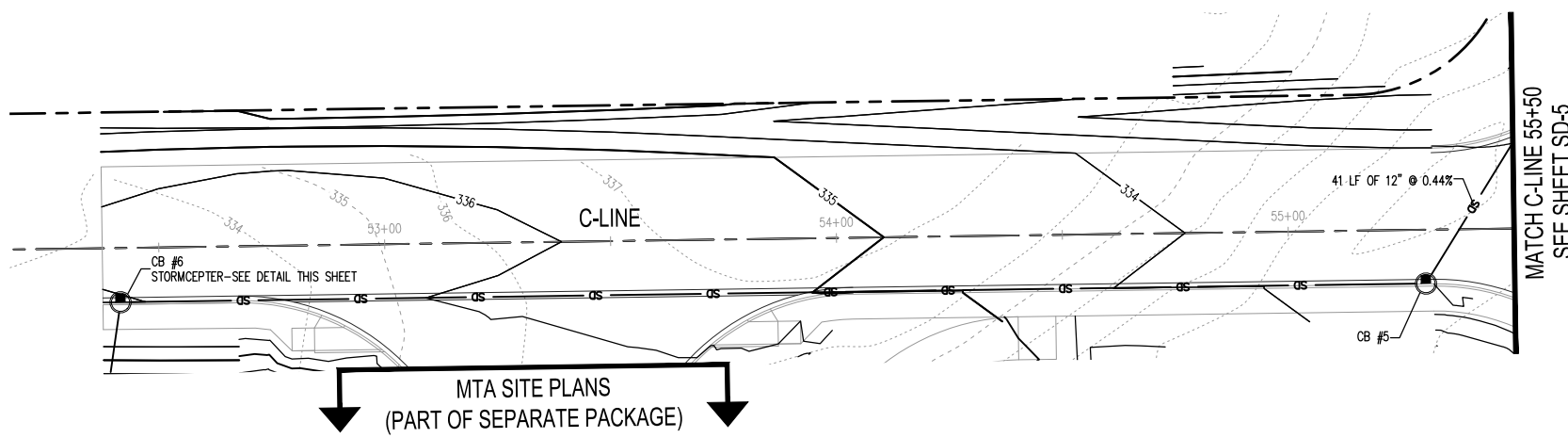
MASON TRANSIT AUTHORITY
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SR-3 AND LOG YARD RD INTERSECTION

DRAWING No.: SD-5
SHEET No.: 20 OF 52

STORM PLAN AND PROFILE



- GENERAL NOTES**
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STORMCEPTOR DESIGN NOTES

THE STANDARD STC450I CONFIGURATION WITH ROUND, SOLID FRAME AND COVER, AND INLET PIPE IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

PLAN VIEW
TOP SLAB NOT SHOWN

SECTION A-A

STORMCEPTOR

STC450I STORMCEPTOR STANDARD DETAIL

CONTECH ENGINEERED SOLUTIONS LLC

3025 Centre Pointe Dr., Suite 400, West Chester, OH 45399
800-888-1122 613-648-7000 613-645-7993 FAX

Aug 28, 2019 6:26:36pm - User: patrick.holm
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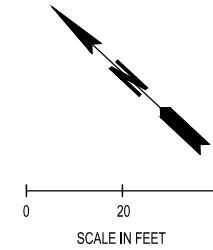
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DRAWING No.: SD-6

SHEET No.: 21 OF 52

STORM PLAN AND PROFILE

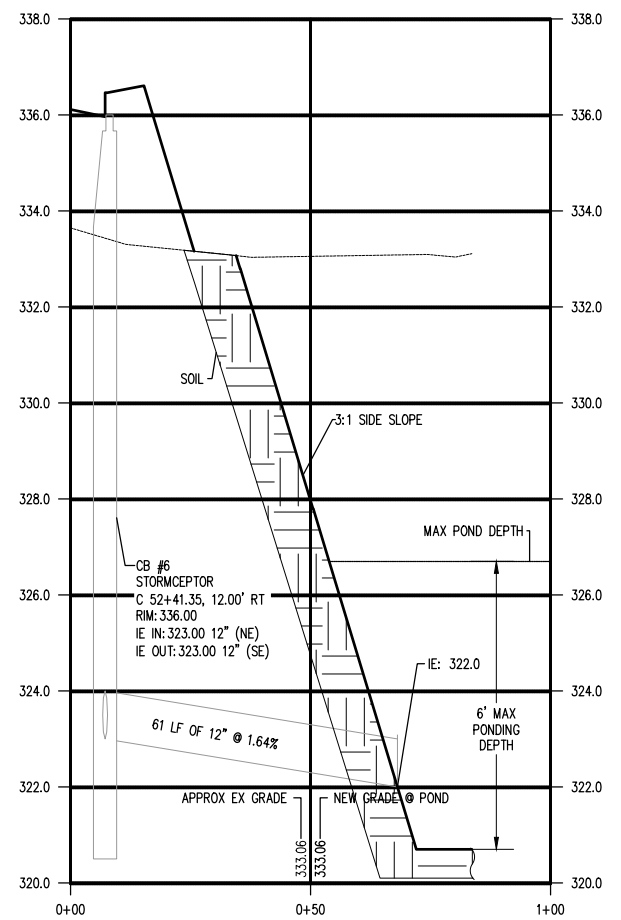
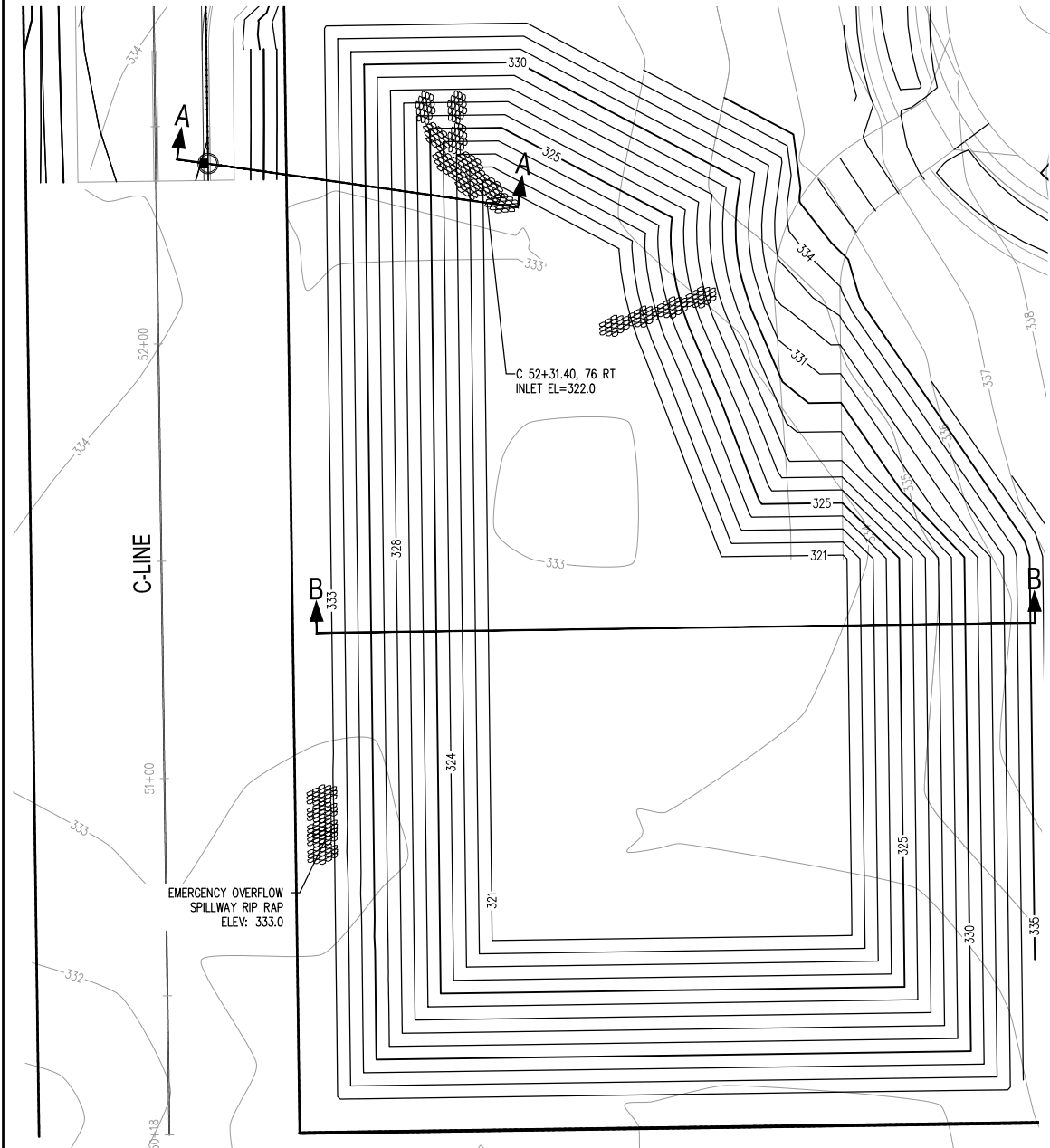
T. 23 N., R. 01 W., S. 21, W.M.



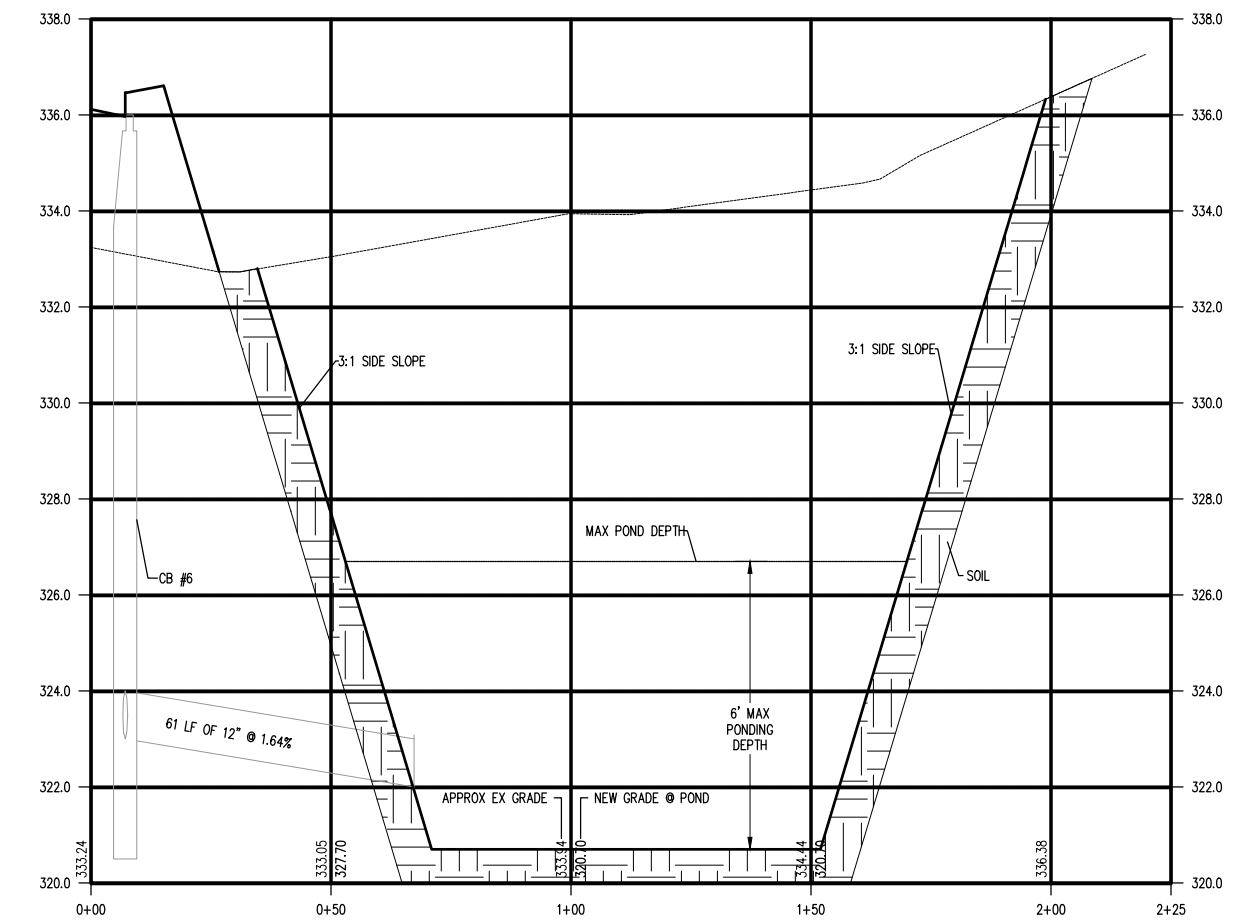
LEGEND	
	RIGHT OF WAY
	SCHEDULE A STORM SEWER PIPE
	CATCH BASIN TYPE 1
	CATCH BASIN TYPE 2
	COMPOST-AMENDED VEGETATIVE FILTER STRIP (SEE DETAIL "C" SHEET XS-6)
	5'x6'x1' DEEP HAND PLACED RIPRAP

GENERAL NOTES

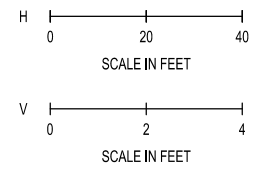
- CATCH BASINS LOCATED ALONG THE CURB AND GUTTER ARE LOCATED (STATION, OFFSET, AND ELEVATION) IN RELATION TO FLOW LINE FACE OF CURB AT THE MIDPOINT BACK OF RIM. ALL OTHER CATCH BASINS ARE LOCATED TO CENTER OF STRUCTURE.
- ALL CATCH BASIN GRATES SHALL HAVE GRATES, PER WSDOT STANDARD PLAN B-30.30, UNLESS OTHERWISE NOTED.
- INSTALL CEMENT CONCRETE CURB AND GUTTER PAN, PER WSDOT STANDARD PLAN F-10.16, AT ALL CATCH BASINS LOCATED ALONG THE CURB AND GUTTER.



SECTION A-A



SECTION B-B

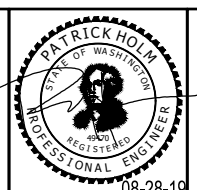


Aug 28, 2019 6:25:51pm - User: patrickholm
K:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-SD-T.DWG

NO.	REVISIONS	DATE	BY
1	FPS #1	04/08/19	PH
2	FPS #2	07/29/19	PH
3	FPS #3	08/28/19	PH

DESIGNED BY: K. MELVIN	ISSUE DATE: JUNE 2019
DRAWN BY: N. MAYFIELD	JOB No.: 0738.05
CHECKED BY: P. HOLM	DRAWING FILE No.: 0738.05-SD-T

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED



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8730 TALLON LANE NE, SUITE 200, LACEY, WASHINGTON 98516
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PROJECT NAME:

MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION
STORM PLAN AND PROFILE

DRAWING No.:
SD-7
SHEET No.:
22 OF 52

T. 23 N., R. 01 W., S. 21, W.M.

LINE TABLE			BEGIN STA. & OFFSET	END STA. & OFFSET
LINE #	LENGTH	DIRECTION		
L30	13.12	N89°25'23"E	A 16+74.36, 29.46 RT	A 16+86.90, 22.45 RT
L31	120.74	N45°41'42"E	A 19+08.95, 17.22 RT	A 19+45.40, 16.17 RT
L32	20.12	N38°02'34"E	A 19+45.40, 16.17 RT	A 20+65.17, 16.19 RT
L33	59.35	N29°20'36"E	A 15+80.97, 15.11 RT	A 16+37.30, 3.08 RT
L34	14.92	S66°23'15"E	B 50+96.76, 11.56 LT	B 51+63.54, 17.59 LT
L35	10.06	S44°42'28"E	B 51+63.54, 17.59 LT	B 51+95.85, 17.77 LT
L36	42.53	N33°15'03"E	A 16+56.40, 28.13 LT	A 16+97.76, 26.52 LT
L38	114.17	N46°19'33"E	A 19+30.62, 30.46 LT	A 20+64.79, 30.17 LT
L39	36.87	N33°13'21"E	A 16+26.23, 24.00 RT	A 16+64.27, 21.68 LT
L40	46.91	S45°26'55"E	B 56+96.14, 21.5 RT	B 57.43.00, 19.44 RT
L41	37.70	S65°19'41"W	A 13+21.25, 16.12 RT	A 13+57.12, 26.21 RT
L42	20.10	N52°01'50"E	A 20+44.77, 19.05 RT	A 2064.69, 16.19 RT

LEGEND	
---	SAWCUT SEE RM-1
.....	CENTERLINE RUMBLE STRIP WSDOT STD. PLAN M-65.10
[Pattern]	HMA CLASS 1/2" PG. 58H-22 SEE XS-1
[Pattern]	CEMENT CONCRETE SIDEWALK SEE XS-1
[Pattern]	PLANING BITUMINOUS PAVEMENT SEE XS-1
[Pattern]	CEMENT CONCRETE PAVEMENT SEE XS-1
[Pattern]	STAMPED COLORED CEMENT CONCRETE SIDEWALK WSDOT STD. PLAN F-30.10
[Pattern]	CURB 1 (2" MOD) ROUNDABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER SEE XS-5
[Pattern]	CURB 1 ROUNDABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER (RC&G) WSDOT STD. PLAN F-10.18
[Pattern]	CURB 2 ROUNDABOUT CEMENT CONCRETE CURB AND GUTTER WSDOT STD. PLAN F-10.18
[Pattern]	ROUNDABOUT CENTRAL ISLAND CEMENT CONCRETE CURB WSDOT STD. PLAN F-10.18
[Symbol]	*ROUNDABOUT SPLITTER ISLAND NOSING CURB WSDOT STD. PLAN F-10.18
[Symbol]	**DETECTABLE WARNING SURFACE WSDOT STD. PLAN F-45.10
[Symbol]	CEMENT CONCRETE TYPE COMBINATION WSDOT STD PLAN F-40.14
[Symbol]	CURB RAMP NUMBER SEE ADA-1 & ADA-2

*CONTRACTOR SHALL MODIFY ROUNDABOUT SPLITTER ISLAND NOSING CURB HEIGHT TO MATCH SPLITTER ISLAND HEIGHT

**DETECTABLE WARNING SURFACES PAY ITEM ONLY USED WHEN INSTALLED IN INSTANCES WITHOUT COMBINATION CURB RAMP. COMBINATION CURB RAMP PAY ITEM INCLUDES DETECTABLE WARNING SURFACE.

PAVING NOTES

- SEE TYPICAL SECTIONS FOR FLOWLINE LOCATION.
- ALL CURB AND GUTTER, STREET GRADES, SIDEWALK GRADES, AND ANY OTHER VERTICAL AND/OR HORIZONTAL ALIGNMENT SHALL BE STAKED BY AN ENGINEERING OR SURVEYING FIRM CAPABLE OF PERFORMING SUCH WORK.
- INSTALL DETECTABLE WARNING SURFACE PER WSDOT STD. DWG. NO. F-45.10-01 AT ALL PEDESTRIAN RAMP LOCATIONS.
- UNLESS NOTED OTHERWISE, CURB OFFSETS ARE TO FACE OF CURB. ELEVATIONS ARE TO BOTTOM FACE OF CURB.

CURVE TABLE			BEGIN STA. & OFFSET	END STA. & OFFSET
CURVE #	LENGTH	RADIUS		
C1	114.28	1087.34	A 10+55.45, 16.59 RT	A 11+70.75, 21.07 RT
C2	17.67	468.00	A 12+55.78, 23.93 RT	A 12+73.66, 23.67 RT
C3	30.22	128.50	A 13+54.85, 35.97 RT	A 13+89.01, 47.08 RT
C4	27.22	50.00	B 55+53.43, 79.03 RT	B 55+72.23, 59.80 RT
C5	82.59	267.00	B 55+72.23, 59.80 RT	B 56+47.20, 31.91 RT
C6	22.11	39.85	B 56+47.20, 31.91 RT	B 56+68.88, 34.45 RT
C7	45.07	60.00	B 56+68.88, 34.45 RT	B 57+12.89, 35.23 RT
C8	12.56	40.00	B 57+12.89, 35.23 RT	B 57+25.15, 32.74 RT
C9	135.48	280.00	A 14+36.72, 44.27 RT	B 56+58.41, 17.26 RT
C10	77.32	84.89	A 13+63.97, 16.93 RT	A 14+36.72, 44.27 RT
C13	116.64	277.00	B 55+52.20, 60.49 RT	B 56+58.41, 17.26 RT
C14	16.27	47.10	B 56+58.75, 20.24 RT	B 57+09.39, 25.87 RT
C15	31.39	50.00	B 56+78.54, 27.22 RT	B 57+09.39, 25.87 RT
C16	15.70	50.00	B 57+09.39, 25.87 RT	B 57+24.71, 22.75 RT
C17	33.97	142.25	A 13+58.14, 22.61 RT	A 13+94.11, 34.30 RT
C18	5.76	2.00	A 12+29.49, 3.56 LT	A 12+30.62, 7.35 LT
C19	43.31	100.00	A 12+29.49, 3.56 LT	A 12+71.67, 4.73 RT
C20	11.29	449.00	A 12+71.67, 4.73 RT	A 12+82.95, 4.19 RT
C21	47.44	91.00	A 13+75.68, 2.00 RT	A 14+22.52, 8.73 RT
C22	2.16	1.00	A 14+22.52, 8.73 RT	A 14+23.87, 7.59 RT
C23	14.00	78.00	A 14+23.87, 7.59 RT	A 14+22.24, 6.30 LT
C24	5.37	3.00	A 14+22.24, 6.30 LT	A 14+18.51, 9.12 LT
C25	29.72	500.00	A 13+89.49, 2.75 LT	A 14+18.51, 9.12 LT
C26	18.94	151.00	A 13+70.88, 1.91 LT	A 13+89.49, 2.75 LT
C27	10.94	50.00	A 12+61.02, 20.70 LT	A 12+71.73, 19.33 LT
C29	88.46	230.00	A 13+37.01, 17.44 LT	A 14+20.16, 33.29 LT
C30	53.57	60.00	A 14+20.16, 33.29 LT	B 54+17.84, 30.14 RT
C31	4.88	81.00	B 54+13.39, 28.14 RT	B 54+17.84, 30.14 RT
C32	68.30	125.00	B 53+43.11, 14.81 RT	B 54+13.39, 28.14 RT
C33	6.49	125.00	B 53+36.62, 14.74 RT	B 53+43.11, 14.81 RT

LINE TABLE			BEGIN STA. & OFFSET	END STA. & OFFSET
LINE #	LENGTH	DIRECTION		
L1	83.96	N52°59'35"E	A 11+70.75, 21.07 RT	A 12+55.78, 23.93 RT
L2	31.65	N50°49'49"E	A 12+73.66, 23.67 RT	A 13+06.04, 22.44 RT
L3	52.87	N65°19'44"E	A 13+05.29, 22.47 RT	A 13+54.85, 35.97 RT
L4	42.06	N79°00'32"E	A 13+89.01, 47.08 RT	B 55+53.43, 79.03 RT
L5	10.00	N44°33'05"E	B 56+81.71, 33.35 RT	B 56+83.65, 23.54 RT
L8	57.72	S79°00'32"W	A 13+21.25, 16.12 RT	A 13+57.12, 26.21 RT
L10	19.21	S65°19'41"W	A 13+39.65, 17.38 RT	A 13+58.14, 22.61 RT
L11	54.78	S79°00'32"W	A 13+94.11, 34.31 RT	A 14+44.98, 44.27 RT
L12	92.93	N49°33'10"E	A 12+82.95, 4.19 RT	A 13+75.68, 2.00 RT
L13	140.49	S53°45'29"W	A 12+30.62, 7.35 LT	A 13+70.88, 1.91 LT
L15	64.21	S53°45'29"W	A 12+71.73, 19.33 LT	A 13+37.01, 17.44 LT
L16	49.77	S66°17'55"W	A 12+14.91, 39.05 LT	A 12+62.41, 26.53 LT
L17	6.59	N33°15'03"E	A 16+97.76, 26.52 LT	A 17+04.18, 26.43 LT
L18	86.39	S45°57'11"E	B 52+31.49, 13.3 RT	B 53+15.27, 20.17 RT
L19	42.02	S42°58'46"E	B 51+90.00, 11.98 RT	B 53+15.27, 13.30 RT
L20	26.06	S51°40'09"W	A 12+73.41, 25.33 LT	A 12+99.47, 25.94 LT
L21	9.22	S37°00'57"W	A 13+64.55, 32.87 LT	A 13+73.56, 34.8 LT
L22	0.42	S56°18'28"E	B 53+81.43, 3.95 LT	B 53+81.83, 4.03 LT
L23	17.24	S45°41'54"E	B 56+23.27, 3.56 LT	B 56+40.49, 4.43 LT
L24	12.72	N43°47'53"W	B 56+56.81, 2.04 RT	B 56+69.52, 1.85 RT
L25	31.94	N54°14'46"W	B 55+80.83, 15.07 RT	B 56+11.60, 7.19 RT
L26	31.12	S38°08'29"E	B 56+95.70, 21.03 LT	B 57+26.71, 18.43 LT
L27	33.32	S39°53'55"E	B 56+28.65, 19.35 LT	B 56+61.93, 17.58 LT
L28	10.00	S31°35'26"W	B 56+84.34, 33.80 RT	B 56+85.48, 23.86 LT
L29	18.28	N39°53'55"W	B 56+29.35, 32.40 LT	B 56+62.62, 30.56 LT

CURVE TABLE			BEGIN STA. & OFFSET	END STA. & OFFSET
CURVE #	LENGTH	RADIUS		
C34	11.23	44.00	A 12+62.41, 26.53 LT	A 12+73.41, 25.33 LT
C35	63.94	250.00	A 12+99.47, 25.94 RT	A 13+64.55, 32.87 LT
C36	49.95	191.00	A 13+73.56, 34.80 LT	A 14+13.02, 56.61 LT
C37	54.95	82.00	B 53+36.50, 20.67 RT	B 53+89.83, 32.38 RT
C38	35.32	60.00	B 53+51.39, 21.42 RT	B 53+89.83, 32.38 RT
C39	11.32	119.00	B 53+40.09, 20.73 RT	B 53+51.39, 21.42 RT
C40	3.60	602.00	B 53+36.50, 20.67 RT	B 53+40.09, 20.73 RT
C41	21.87	602.00	B 53+15.27, 20.17 RT	B 53+36.50, 20.67 RT
C42	2.11	1.00	B 54+23.21, 10.58 RT	B 54+24.60, 9.54 RT
C43	2.21	78.00	B 54+25.05, 12.58 LT	B 54+24.60, 9.54 RT
C44	6.40	3.00	B 54+20.94, 15.85 LT	B 54+25.05, 12.58 LT
C45	40.95	201.00	B 53+81.83, 4.03 LT	B 54+20.94, 15.85 LT
C46	8.86	3.00	B 53+81.43, 3.95 LT	B 53+81.97, 2.00 RT
C47	42.42	101.00	B 53+81.97, 2.00 RT	B 54+23.21, 10.58 RT
C48	5.71	3.00	B 55+77.09, 11.93 RT	B 55+80.83, 15.07 RT
C49	20.77	78.00	B 55+76.00, 8.75 LT	B 55+77.09, 11.93 RT
C50	2.11	1.00	B 55+76.00, 8.75 LT	B 55+77.33, 9.88 LT
C51	46.56	101.00	B 55+77.33, 9.88 LT	B 56+23.27, 3.56 LT
C52	15.94	249.00	B 56+40.49, 4.43 LT	B 56+56.48, 4.68 LT
C53	14.06	40.00	B 56+56.48, 4.68 LT	B 56+70.21, 2.02 LT
C54	5.52	2.00	B 56+69.52, 1.85 LT	B 56+70.21, 2.02 LT
C55	45.77	251.00	B 56+11.60, 7.19 RT	B 56+56.81, 2.04 RT
C56	38.90	394.00	B 56+26.71, 18.43 LT	B 57+65.57, 17.10 LT
C57	17.82	50.00	B 56+78.05, 19.36 LT	B 56+95.7, 21.03 LT
C58	16.29	50.00	B 56+61.93, 17.58 LT	B 56+78.05, 19.36 LT
C59	86.96	100.00	B 55+51.07, 55.36 LT	B 56+28.65, 19.35 LT
C60	84.18	275.00	A 16+22.92, 16.94 RT	B 55+51.07, 55.36 LT
C61	25.09	600.00	A 16+22.92, 16.94 RT	A 16+46.21, 16.17 RT
C62	46.12	988.00	A 16+58.47, 16.30 RT	A 16+93.09, 16.64 RT
C63	7.04	60.00	B 56+74.55, 31.88 LT	B 56+84.34, 33.80 RT

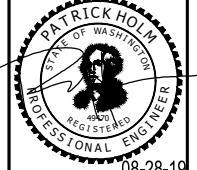
CURVE TABLE			BEGIN STA. & OFFSET	END STA. & OFFSET
CURVE #	LENGTH	RADIUS		
C64	22.02	50.00	B 56+62.62, 30.56 LT	B 56+74.55, 31.88 LT
C65	75.66	87.00	B 55+60.98, 63.78 LT	B 56+29.35, 32.40 LT
C66	80.20	282.00	B 55+60.98, 63.78 LT	A 16+24.25, 29.83 RT
C67	52.00	743.64	A 16+24.25, 29.83 RT	A 16+74.36, 29.46 RT
C68	231.10	980.00	A 16+86.90, 22.45 RT	A 19+08.95, 17.22 RT
C69	21.20	78.00	B 54+75.96, 9.11 LT	A 15+77.08, 12.00 RT
C70	5.87	3.00	A 15+77.08, 12.00 RT	A 15+80.97, 15.11 RT
C71	82.59	1001.00	A 16+37.30, 3.08 RT	A 17+20.18, 3.90 RT
C72	5.90	2.00	B 17+20.18, 3.90 RT	A 17+20.60, 0.06 LT
C73	49.76	200.00	A 16+71.33, 5.00 LT	A 17+20.60, 0.06 LT
C74	37.65	1005.84	A 16+33.87, 5.00 LT	A 16+71.33, 5.00 LT
C75	55.62	81.00	A 15+77.29, 10.23 LT	A 16+33.87, 5.00 LT
C76	2.12	1.00	A 15+75.96, 9.11 LT	A 15+77.29, 10.23 LT
C77	40.49	582.00	B 51+95.85, 17.77 LT	B 52+37.34, 18.79 LT
C78	133.16	450.00	B 52+37.34, 18.79 LT	B 53+71.12, 28.6 LT
C79	33.41	301.00	B 53+71.12, 28.6 LT	B 53+98.64, 41.07 LT
C80	61.54	170.00	B 53+98.64, 41.07 LT	A 15+74.93, 55.24 RT
C81	75.56	80.00	A 15+75.93, 55.24 LT	A 16+56.40, 28.13 LT
C82	233.35	1017.12	A 17+04.18, 26.43 LT	A 19+30.62, 30.46 LT
C84	175.44	588.00	B 51+95.87, 11.77 LT	B 53+72.42, 18.27 LT
C85	94.83	265.00	B 53+72.42, 18.27 LT	B 54+54.98, 59.98 LT
C86	69.25	62.00	A 54+54.98, 59.98 LT	A 16+26.23, 24.00 LT
C87	17.41	50.00	B 56+78.96, 19.25 RT	B 56+96.14, 21.50 RT
C88	20.80	50.00	B 56+58.41, 17.26 RT	B 56+78.96, 19.25 RT
C89	33.07	138.50	A 13+57.12, 26.21 RT	A 13+92.72, 37.80 RT

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DRAWN BY:	JOB No.:
N. MAYFIELD	0738.05

CHECKED BY:	DRAWING FILE No.:
P. HOLM	0738.05-PV-T

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SCJ ALLIANCE CONSULTING SERVICES
 8730 TALLON LANE NE, SUITE 200, LACEY, WASHINGTON 98516
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PROJECT NAME:

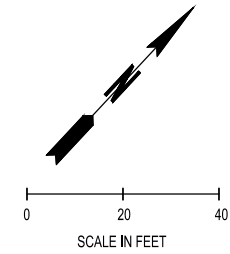
MASON TRANSIT AUTHORITY
 BELFAIR
 SR-3 AND LOG YARD RD INTERSECTION

PAVING PLAN

DRAWING No.: PV-1
 SHEET No.: 23 OF 52

Aug 28, 2019 4:16:59pm - User: keno.melvin
 N:\PROJECTS\0738 MASON TRANSIT AUTHORITY\0738.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-PV-T.DWG

T. 23 N., R. 01 W., S. 21, W.M.



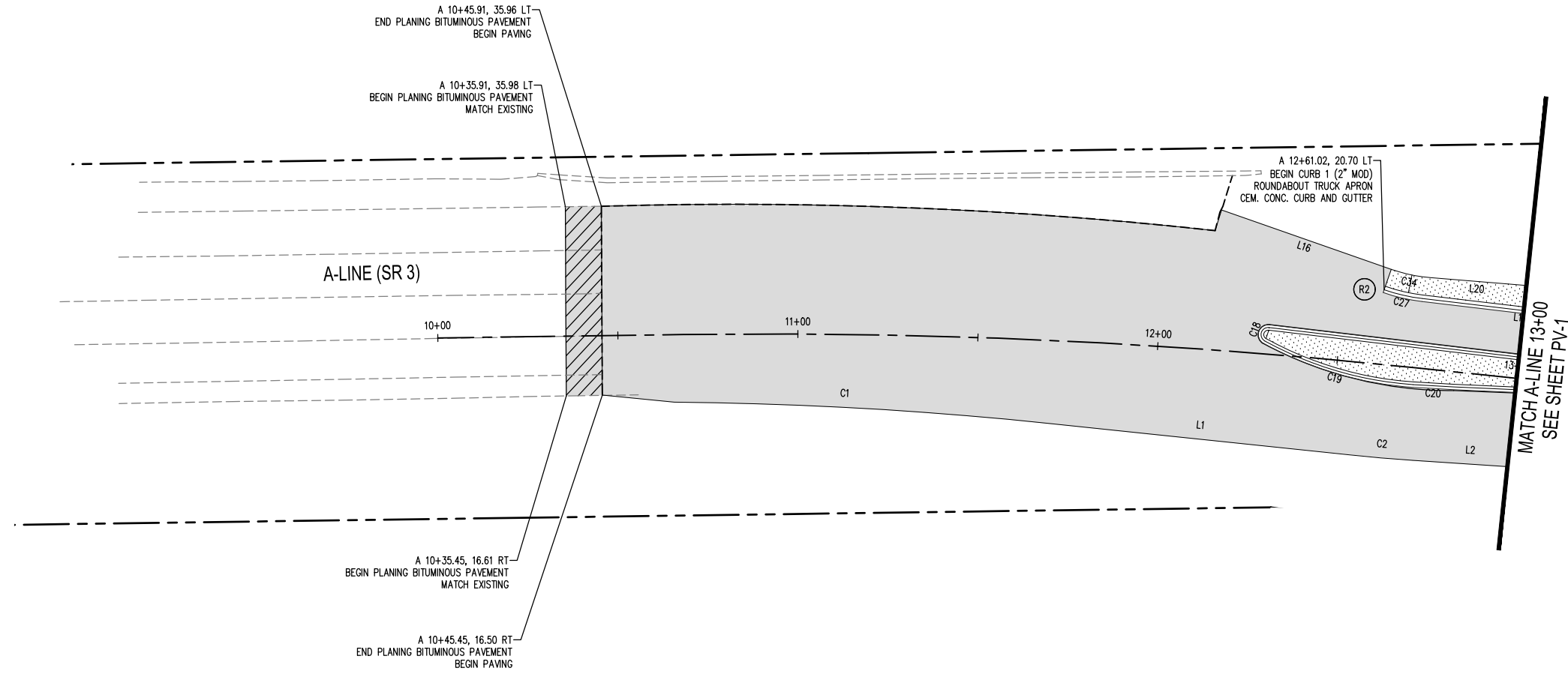
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[Symbol]	**DETECTABLE WARNING SURFACE	WSDOT STD. PLAN F-45.10
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[Symbol]	CURB RAMP NUMBER	SEE ADA-1 & ADA-2

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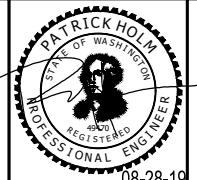
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Aug 28, 2019 4:15:04pm - User: keno.melvin - N:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-PV-T.DWG

△	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
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				CHECKED BY: P. HOLM	DRAWING FILE No.: 0738.05-PV-T

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED



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PROJECT NAME:

MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

PAVING PLAN

DRAWING No.: PV-2
SHEET No.: 24 OF 52

T. 23 N., R. 01 W., S. 21, W.M.

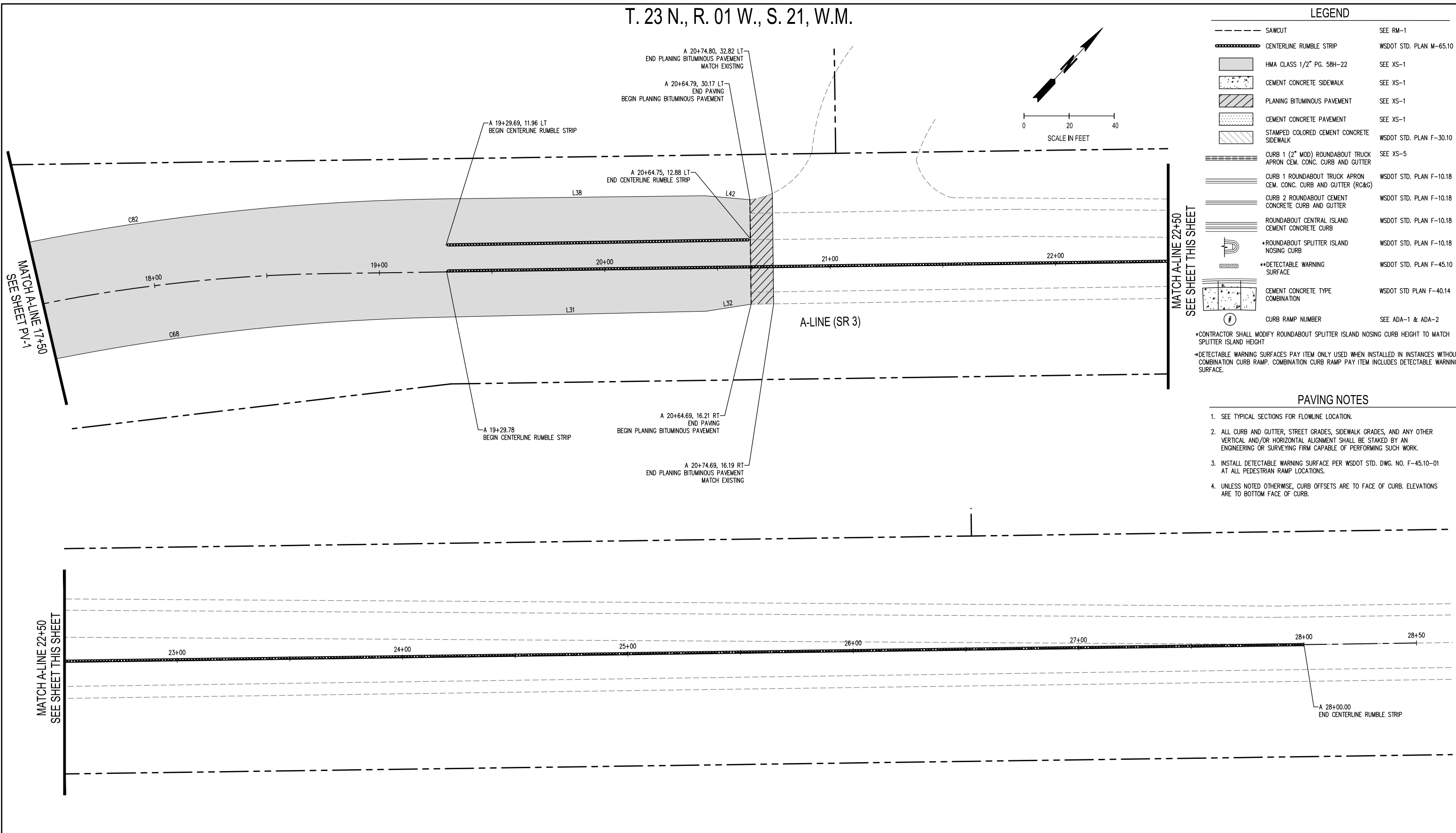
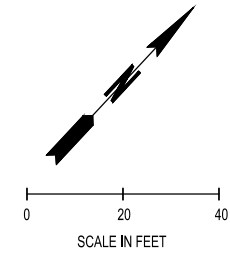
LEGEND

---	SAWCUT	SEE RM-1
----	CENTERLINE RUMBLE STRIP	WSDOT STD. PLAN M-65.10
■	HMA CLASS 1/2" PG. 58H-22	SEE XS-1
■	CEMENT CONCRETE SIDEWALK	SEE XS-1
■	PLANING BITUMINOUS PAVEMENT	SEE XS-1
■	CEMENT CONCRETE PAVEMENT	SEE XS-1
■	STAMPED COLORED CEMENT CONCRETE SIDEWALK	WSDOT STD. PLAN F-30.10
====	CURB 1 (2" MOD) ROUNDABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER	SEE XS-5
====	CURB 1 ROUNDABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER (RC&G)	WSDOT STD. PLAN F-10.18
====	CURB 2 ROUNDABOUT CEMENT CONCRETE CURB AND GUTTER	WSDOT STD. PLAN F-10.18
====	ROUNDABOUT CENTRAL ISLAND CEMENT CONCRETE CURB	WSDOT STD. PLAN F-10.18
⌋	*ROUNDABOUT SPLITTER ISLAND NOSING CURB	WSDOT STD. PLAN F-10.18
■	**DETECTABLE WARNING SURFACE	WSDOT STD. PLAN F-45.10
■	CEMENT CONCRETE TYPE COMBINATION	WSDOT STD PLAN F-40.14
Ⓢ	CURB RAMP NUMBER	SEE ADA-1 & ADA-2

*CONTRACTOR SHALL MODIFY ROUNDABOUT SPLITTER ISLAND NOSING CURB HEIGHT TO MATCH SPLITTER ISLAND HEIGHT
 **DETECTABLE WARNING SURFACES PAY ITEM ONLY USED WHEN INSTALLED IN INSTANCES WITHOUT COMBINATION CURB RAMP. COMBINATION CURB RAMP PAY ITEM INCLUDES DETECTABLE WARNING SURFACE.

PAVING NOTES

- SEE TYPICAL SECTIONS FOR FLOWLINE LOCATION.
- ALL CURB AND GUTTER, STREET GRADES, SIDEWALK GRADES, AND ANY OTHER VERTICAL AND/OR HORIZONTAL ALIGNMENT SHALL BE STAKED BY AN ENGINEERING OR SURVEYING FIRM CAPABLE OF PERFORMING SUCH WORK.
- INSTALL DETECTABLE WARNING SURFACE PER WSDOT STD. DWG. NO. F-45.10-01 AT ALL PEDESTRIAN RAMP LOCATIONS.
- UNLESS NOTED OTHERWISE, CURB OFFSETS ARE TO FACE OF CURB. ELEVATIONS ARE TO BOTTOM FACE OF CURB.



MATCH A-LINE 17+50
SEE SHEET PV-1

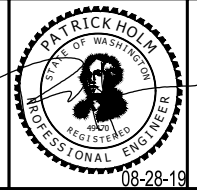
MATCH A-LINE 22+50
SEE SHEET THIS SHEET

MATCH A-LINE 22+50
SEE SHEET THIS SHEET

Aug 28, 2019 4:15:10pm - User: kono.melvin - I:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-PV-T.DWG

Δ	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH	N. MAYFIELD	JOB No.: 0738.05
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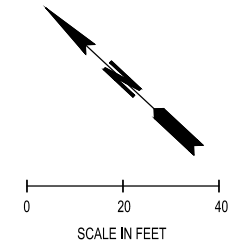
PROJECT NAME: 

MASON TRANSIT AUTHORITY
 BELFAIR
 SR-3 AND LOG YARD RD INTERSECTION

PAVING PLAN

DRAWING No.: PV-3
 SHEET No.: 25 OF 52

T. 23 N., R. 01 W., S. 21, W.M.

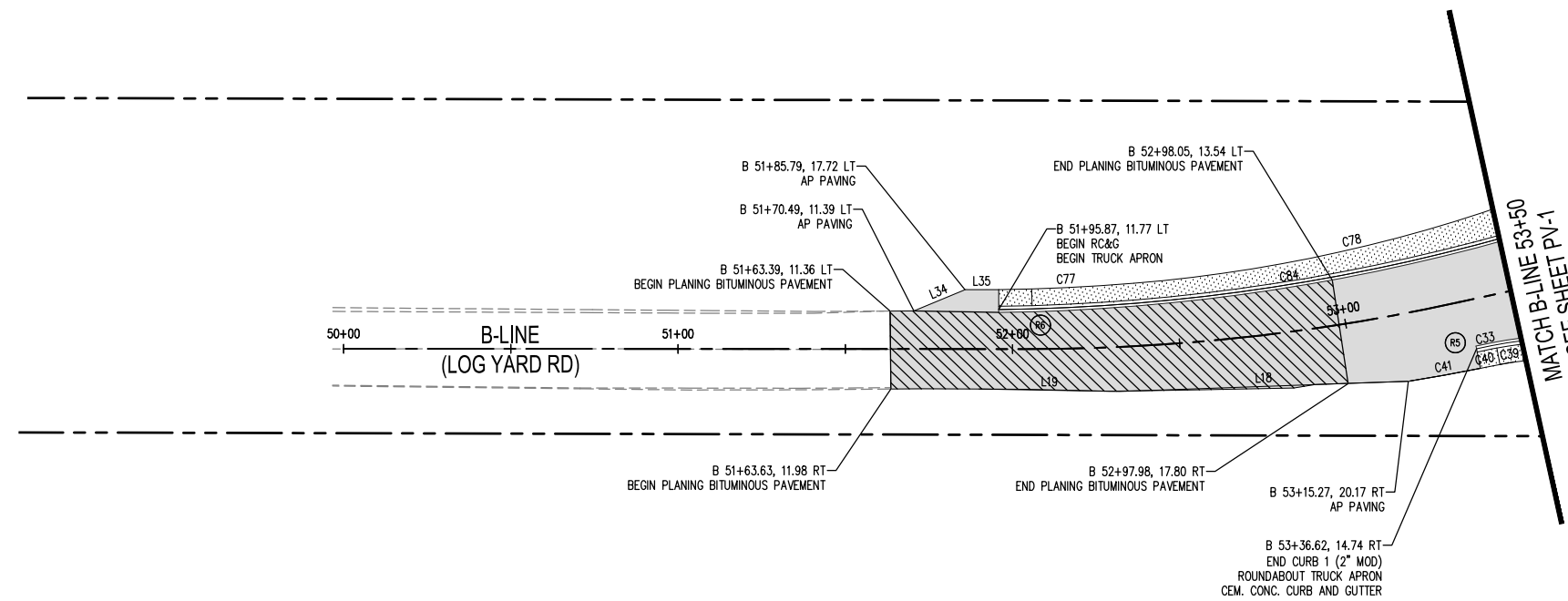


LEGEND	
---	SAWCUT SEE RM-1
-----	CENTERLINE RUMBLE STRIP WSDOT STD. PLAN M-65.10
[Pattern]	HMA CLASS 1/2" PG. 58H-22 SEE XS-1
[Pattern]	CEMENT CONCRETE SIDEWALK SEE XS-1
[Pattern]	PLANING BITUMINOUS PAVEMENT SEE XS-1
[Pattern]	CEMENT CONCRETE PAVEMENT SEE XS-1
[Pattern]	STAMPED COLORED CEMENT CONCRETE SIDEWALK WSDOT STD. PLAN F-30.10
[Pattern]	CURB 1 (2" MOD) ROUNDABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER SEE XS-5
[Pattern]	CURB 1 ROUNDABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER (RC&G) WSDOT STD. PLAN F-10.18
[Pattern]	CURB 2 ROUNDABOUT CEMENT CONCRETE CURB AND GUTTER WSDOT STD. PLAN F-10.18
[Pattern]	ROUNDABOUT CENTRAL ISLAND CEMENT CONCRETE CURB WSDOT STD. PLAN F-10.18
[Symbol]	*ROUNDABOUT SPLITTER ISLAND NOSING CURB WSDOT STD. PLAN F-10.18
[Symbol]	**DETECTABLE WARNING SURFACE WSDOT STD. PLAN F-45.10
[Pattern]	CEMENT CONCRETE TYPE COMBINATION WSDOT STD PLAN F-40.14
[Symbol]	Ⓝ CURB RAMP NUMBER SEE ADA-1 & ADA-2

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PAVING NOTES

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Δ	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
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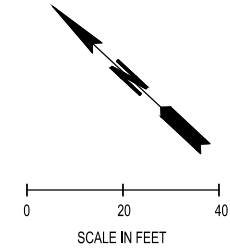
PROJECT NAME:

MASON TRANSIT AUTHORITY
 BELFAIR
 SR-3 AND LOG YARD RD INTERSECTION

PAVING PLAN

DRAWING No.: PV-4
 SHEET No.: 26 OF 52

T. 23 N., R. 01 W., S. 21, W.M.

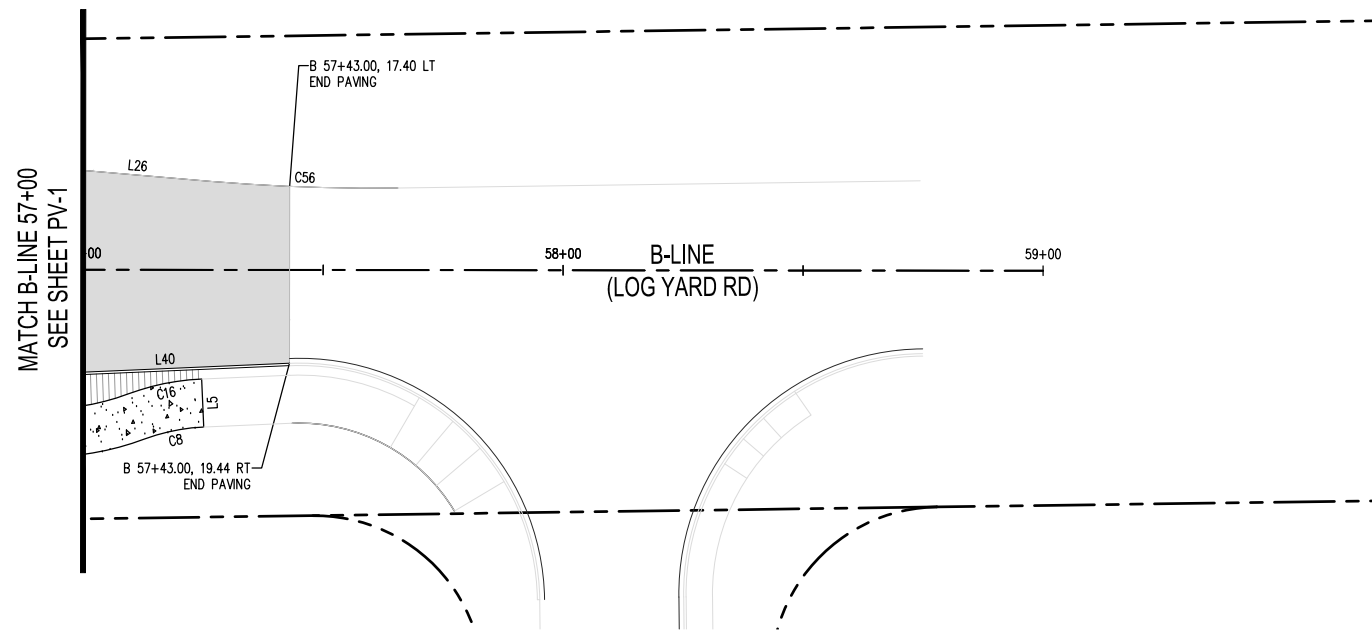


LEGEND	
---	SAWCUT SEE RM-1
-----	CENTERLINE RUMBLE STRIP WSDOT STD. PLAN M-65.10
[Pattern]	HMA CLASS 1/2" PG. 58H-22 SEE XS-1
[Pattern]	CEMENT CONCRETE SIDEWALK SEE XS-1
[Pattern]	PLANING BITUMINOUS PAVEMENT SEE XS-1
[Pattern]	CEMENT CONCRETE PAVEMENT SEE XS-1
[Pattern]	STAMPED COLORED CEMENT CONCRETE SIDEWALK WSDOT STD. PLAN F-30.10
[Pattern]	CURB 1 (2" MOD) ROUNDABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER SEE XS-5
[Pattern]	CURB 1 ROUNDABOUT TRUCK APRON CEM. CONC. CURB AND GUTTER (RC&G) WSDOT STD. PLAN F-10.18
[Pattern]	CURB 2 ROUNDABOUT CEMENT CONCRETE CURB AND GUTTER WSDOT STD. PLAN F-10.18
[Pattern]	ROUNDABOUT CENTRAL ISLAND CEMENT CONCRETE CURB WSDOT STD. PLAN F-10.18
[Symbol]	*ROUNDABOUT SPLITTER ISLAND NOSING CURB WSDOT STD. PLAN F-10.18
[Symbol]	**DETECTABLE WARNING SURFACE WSDOT STD. PLAN F-45.10
[Pattern]	CEMENT CONCRETE TYPE COMBINATION WSDOT STD PLAN F-40.14
[Symbol]	Ⓝ CURB RAMP NUMBER SEE ADA-1 & ADA-2

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PAVING NOTES

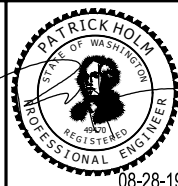
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1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH	N. MAYFIELD	JOB No.: 0738.05
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MASON TRANSIT AUTHORITY
 BELFAIR
 SR-3 AND LOG YARD RD INTERSECTION

PAVING PLAN

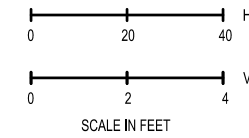
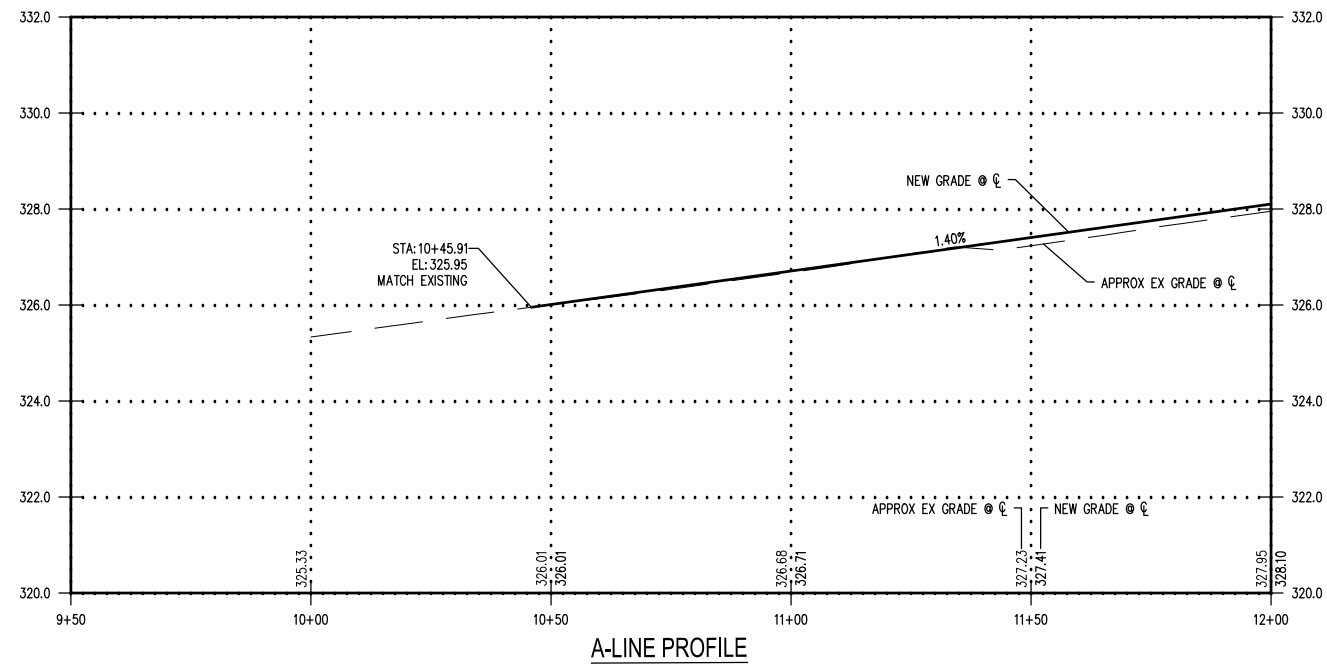
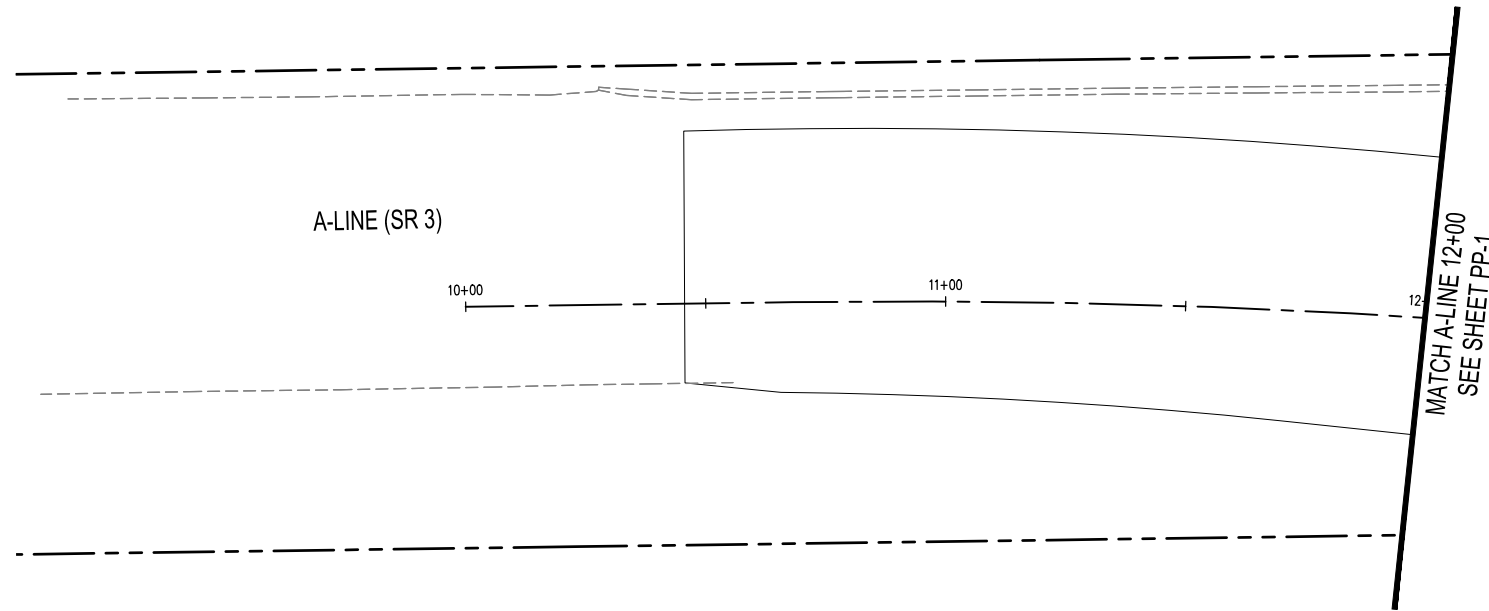
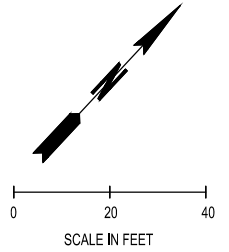
DRAWING No.:

PV-5

SHEET No.:

27 OF 52

T. 23 N., R. 01 W., S. 21, W.M.

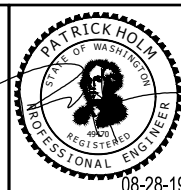


Aug 28, 2019 4:16:11pm - User: keno.melvin - N:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-PP-1.DWG

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1	FPS #1	04/08/19	PH
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3	FPS #3	08/28/19	PH

DESIGNED BY: K. MELVIN	ISSUE DATE: JUNE 2019
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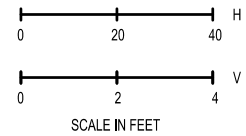
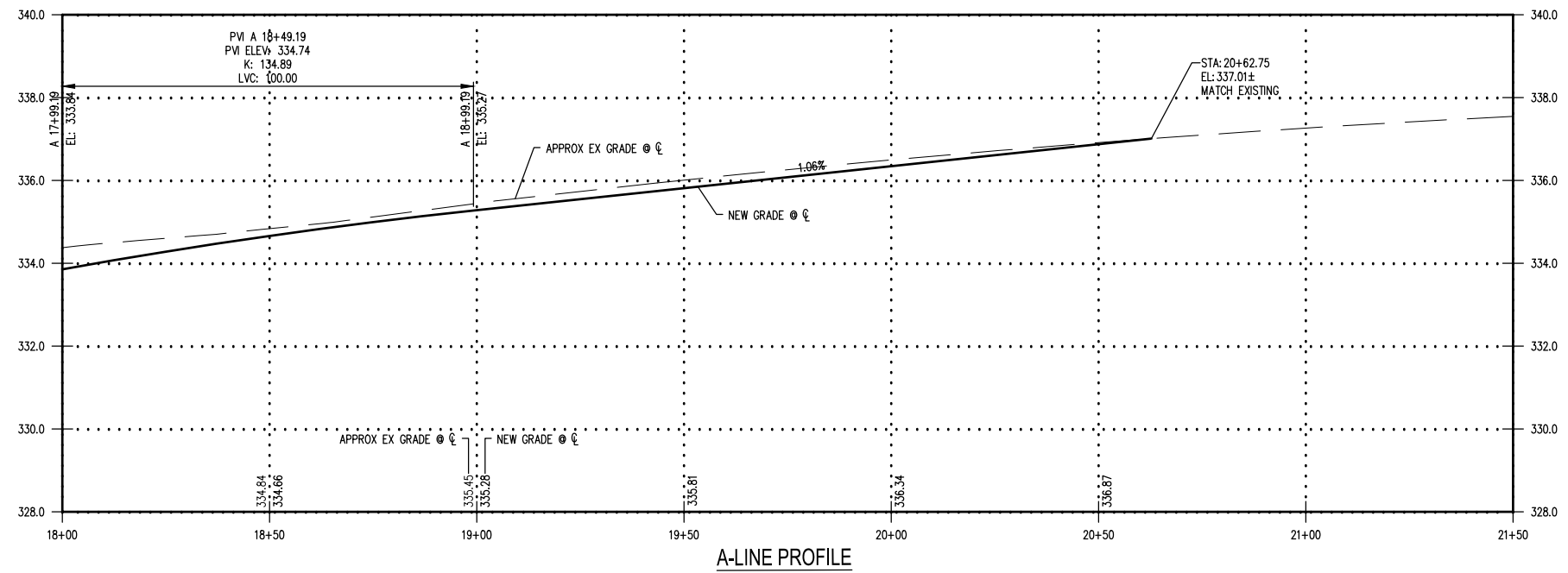
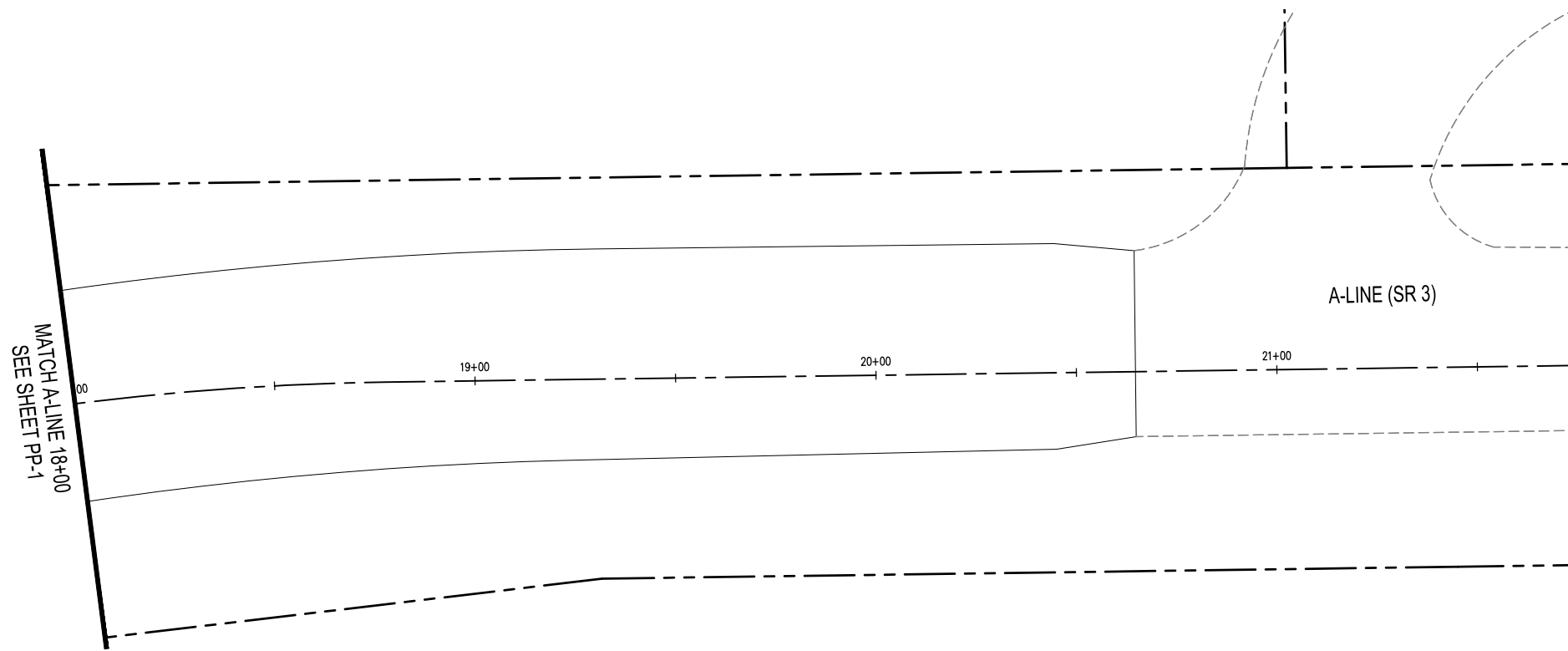
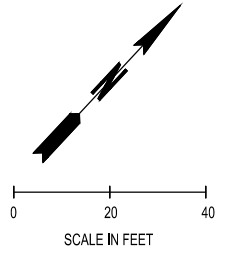
MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

PLAN AND PROFILE

DRAWING No.:
PP-2

SHEET No.:
30 OF 52

T. 23 N., R. 01 W., S. 21, W.M.



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1	FPS #1	04/08/19	PH
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DESIGNED BY: K. MELVIN	ISSUE DATE: JUNE 2019
DRAWN BY: N. MAYFIELD	JOB No.: 0738.05
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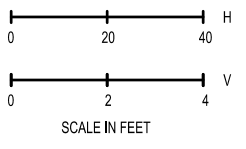
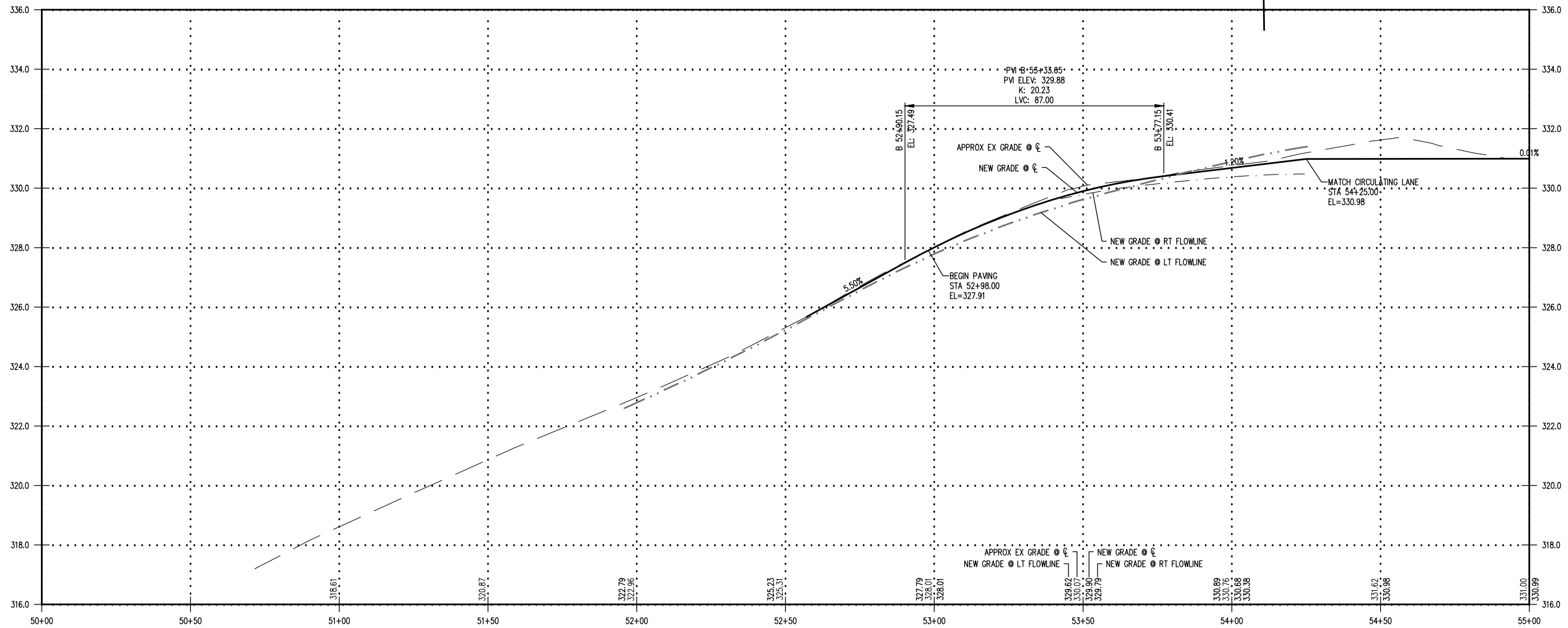
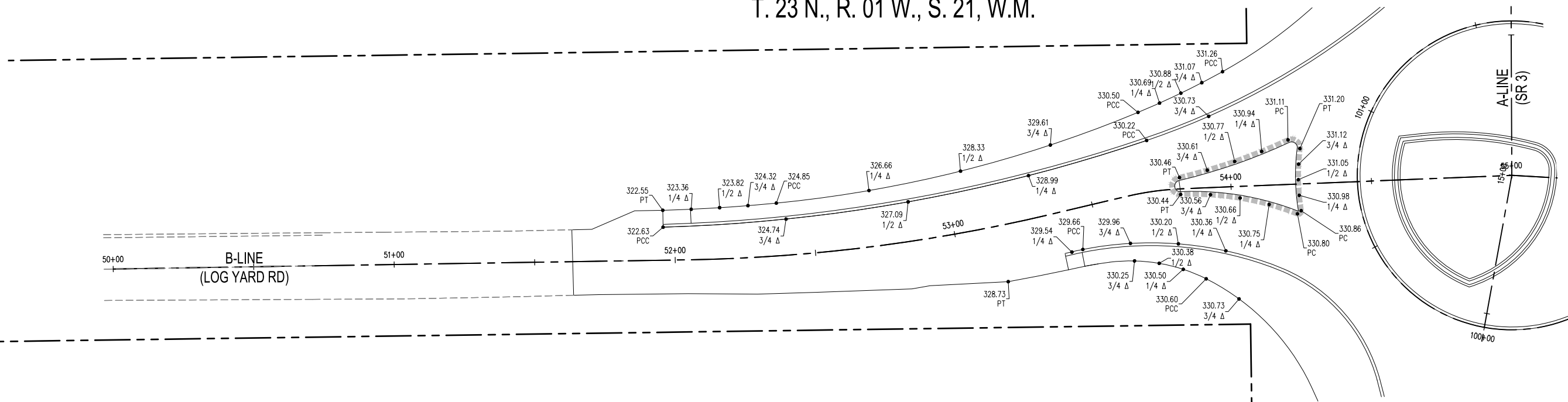
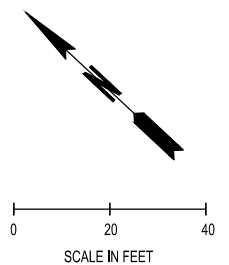
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MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

PLAN AND PROFILE

T. 23 N., R. 01 W., S. 21, W.M.



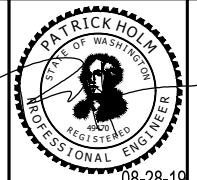
B-LINE PROFILE

Aug 28, 2019 4:16:30pm - User: kemo.melvin
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REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1 FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
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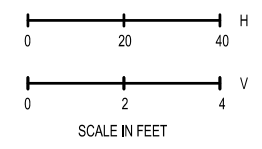
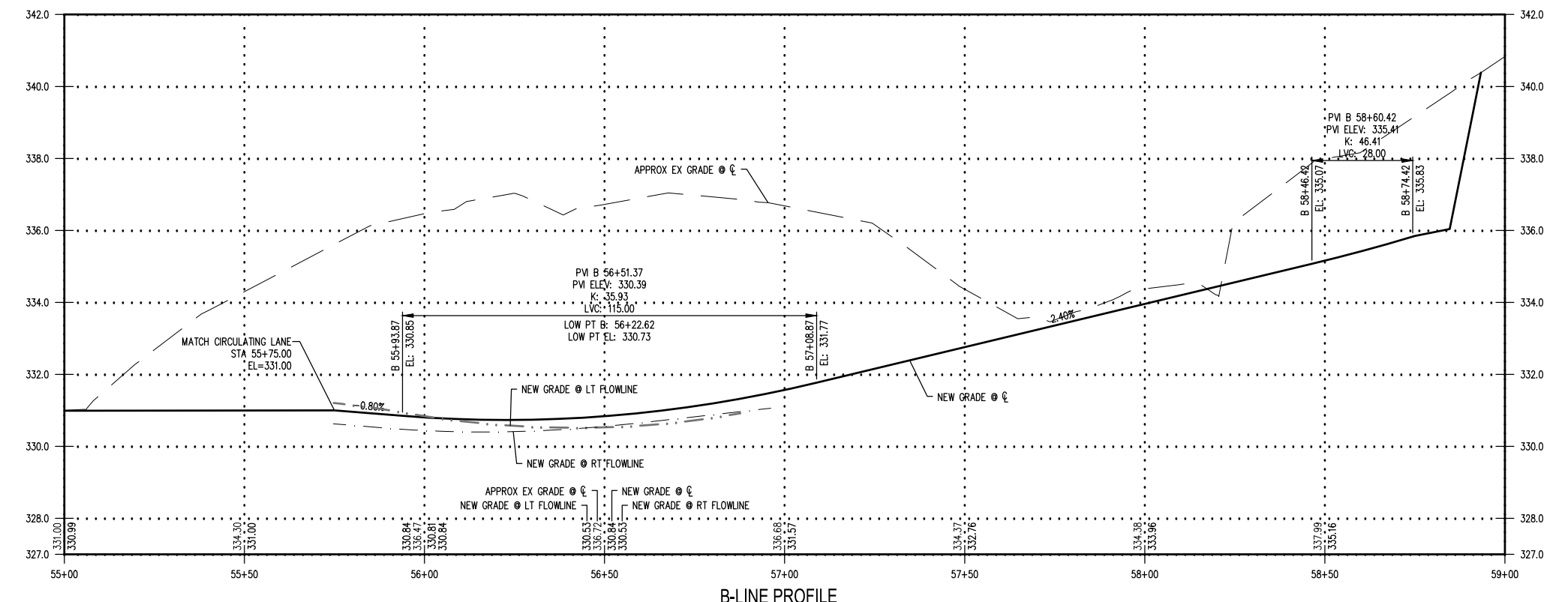
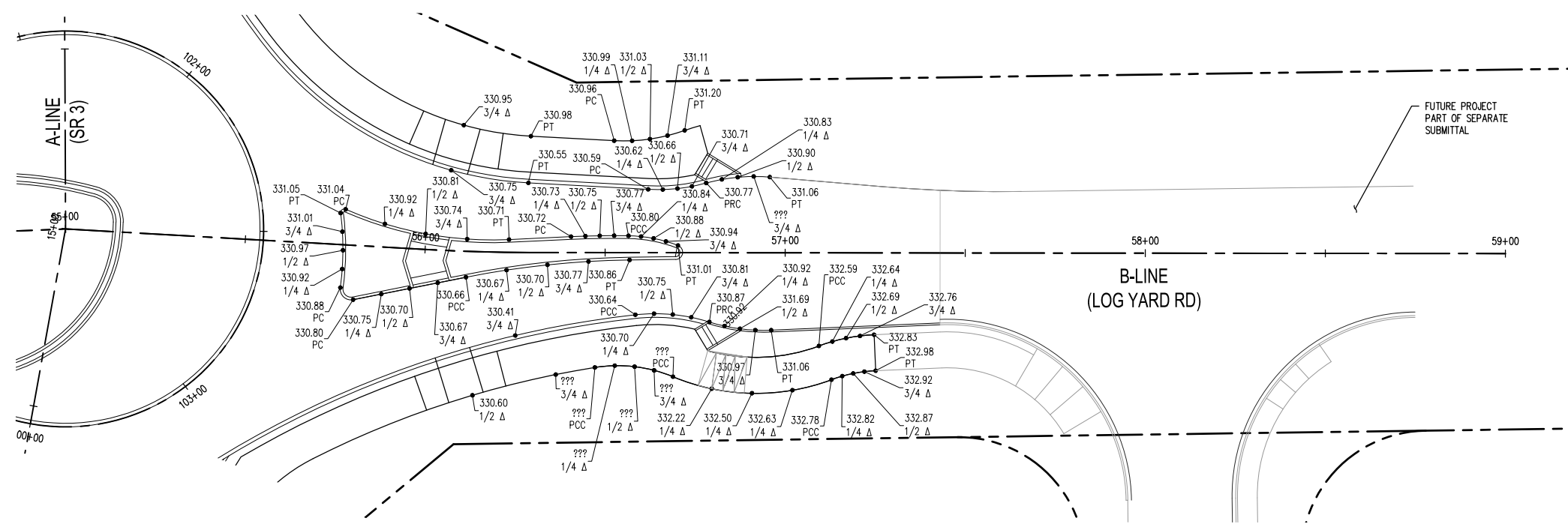
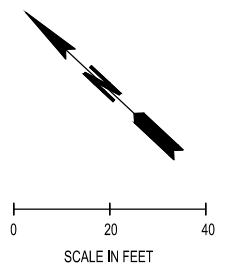
PROJECT NAME:

MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

DRAWING No.: PP-4
SHEET No.: 32 OF 52

PLAN AND PROFILE

T. 23 N., R. 01 W., S. 21, W.M.



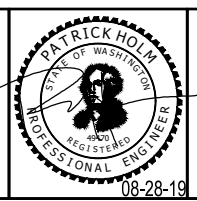
B-LINE PROFILE

Aug 28, 2019 4:16:49pm - User: kensmelvin N:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-PP-T.DWG

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1	FPS #1	04/08/19	PH
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DESIGNED BY: K. MELVIN	ISSUE DATE: JUNE 2019
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PLAN AND PROFILE

DRAWING No.:
PP-5
SHEET No.:
33 OF 52

T. 23 N., R. 01 W., S. 21, W.M.

MATCH A-LINE 54+00 SEE SHEET PP-4

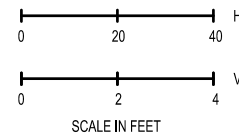
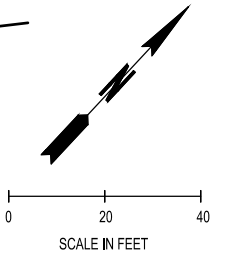
MATCH A-LINE 12+00
SEE SHEET PP-2

MATCH A-LINE 18+00
SEE SHEET PP-3

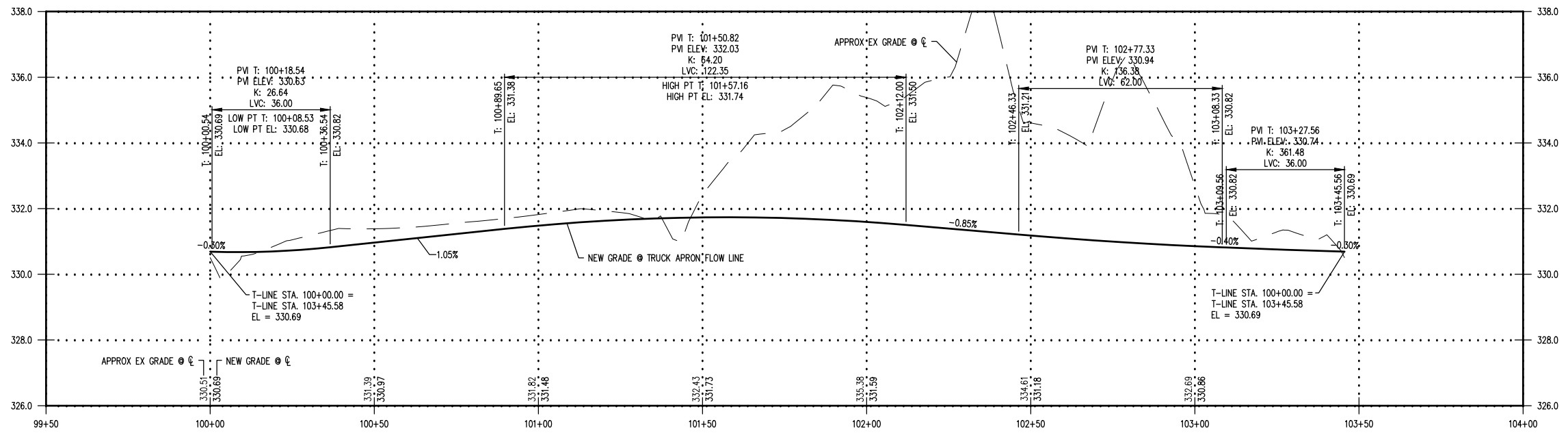
T-LINE (TRUCK APRON FLOW LINE)

B-LINE
(LOG YARD RD)

A-LINE (SR 3)



MATCH A-LINE 56+00 SEE SHEET PP-5

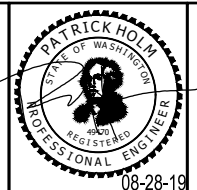


Aug 28, 2019 4:18:45pm - User: ken.melvin
N:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-PP-T.DWG

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N. MAYFIELD	0738.05
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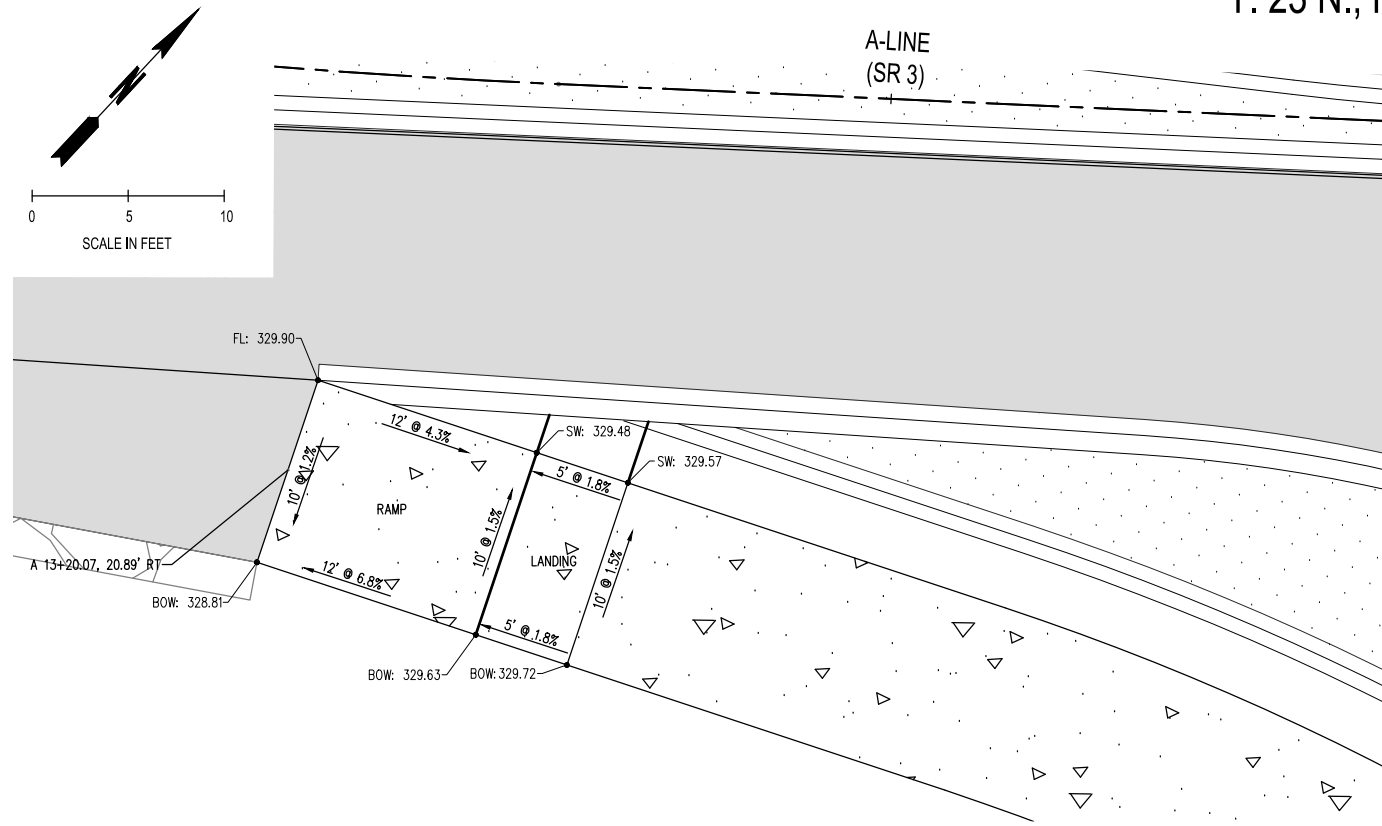
PROJECT NAME:

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BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

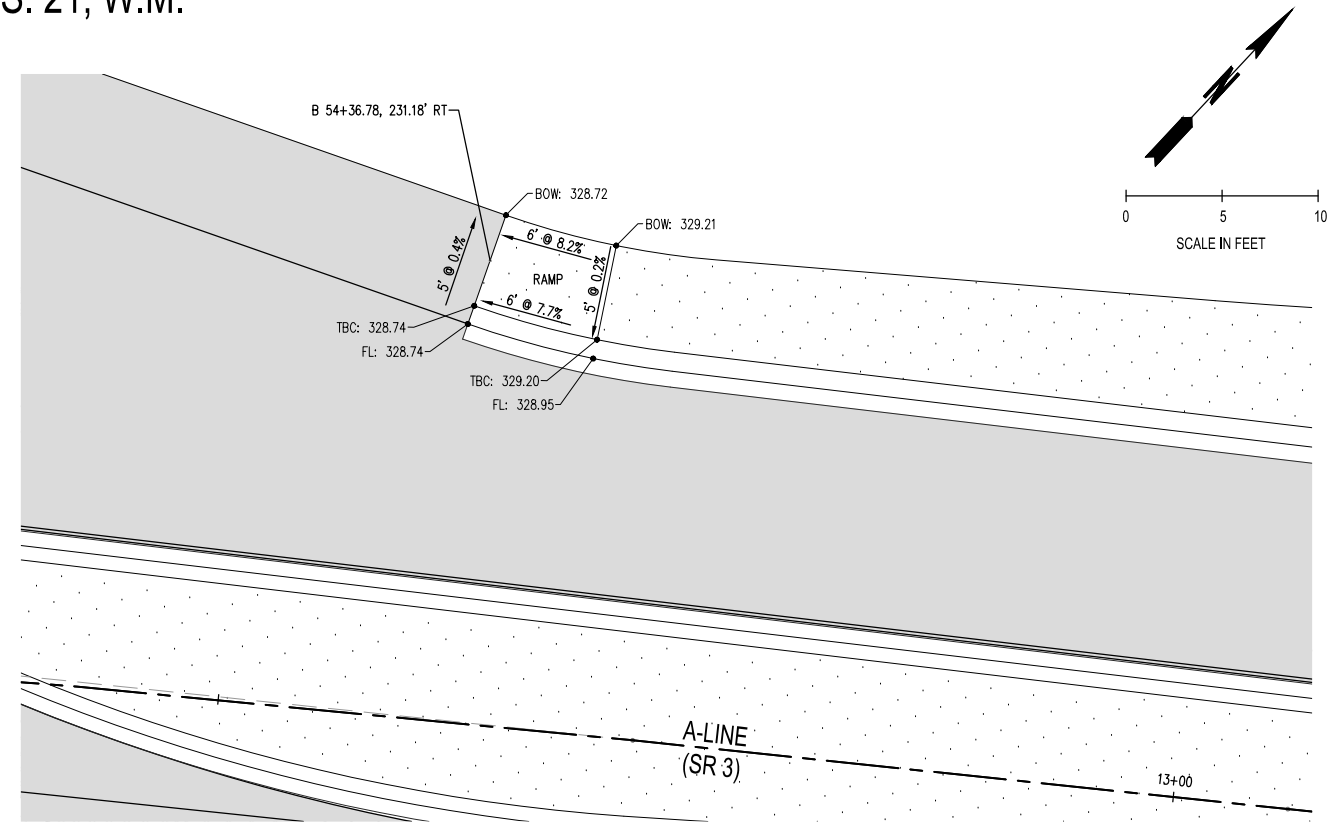
DRAWING No.: PP-6
SHEET No.: 34 OF 52

PLAN AND PROFILE

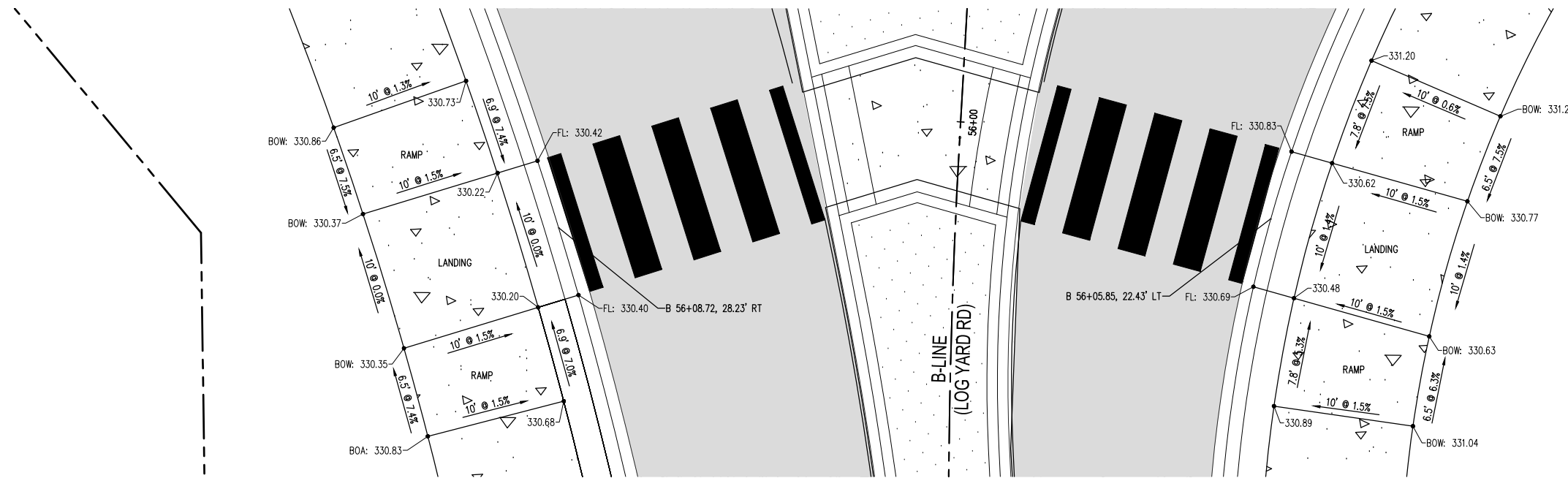
T. 23 N., R. 01 W., S. 21, W.M.



R1 SOUTH OF SR 3 AND LOG YARD RD INTERSECTION



R2 SOUTH OF SR 3 AND LOG YARD RD INTERSECTION



R3 EAST OF SR 3 AND LOG YARD RD INTERSECTION

R4 EAST OF SR 3 AND LOG YARD RD INTERSECTION

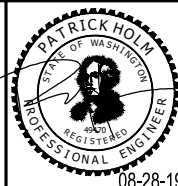
ABBREVIATIONS

BOA	BACK OF TRUCK APRON
BOW	BACK OF WALK
FL	FLOW LINE
FG	FINISHED GRADE
TBC	TOP BACK OF CURB

Aug 28, 2019 4:17:11pm - User: keno.melvin
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1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH	N. MAYFIELD	JOB No.: 0738.05
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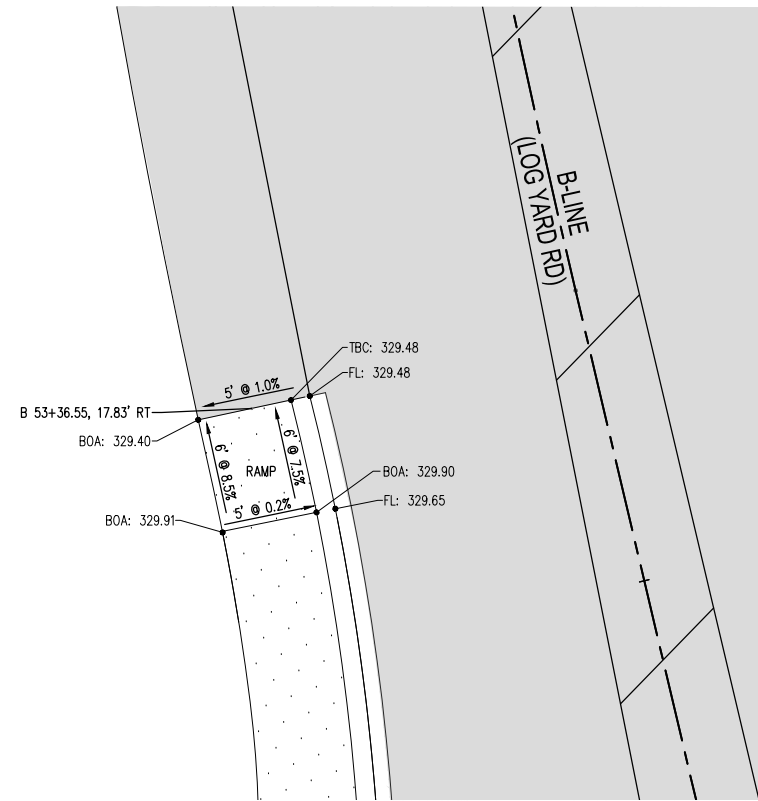
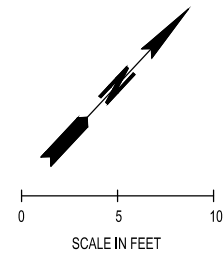


MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

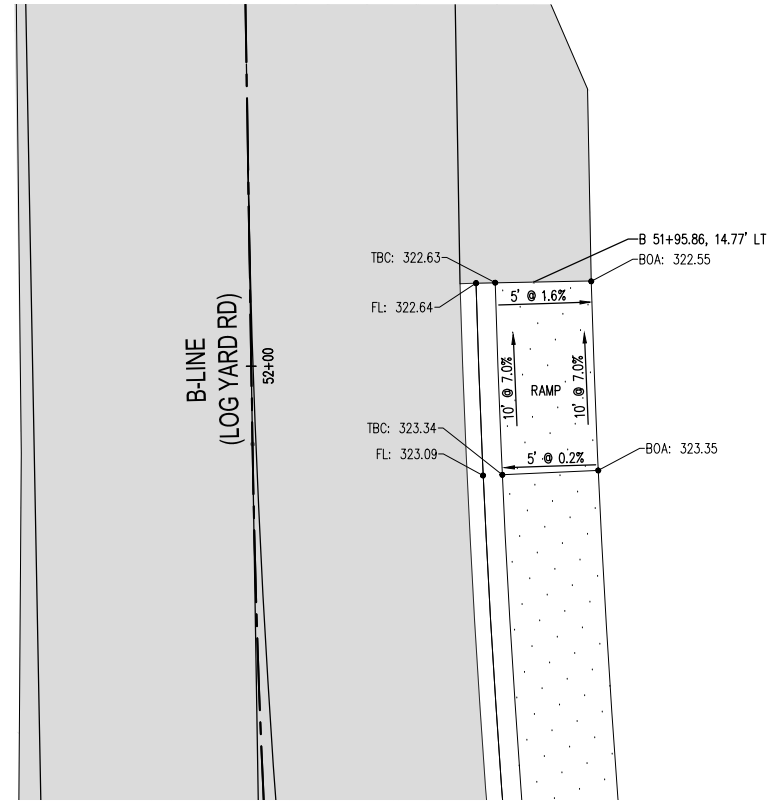
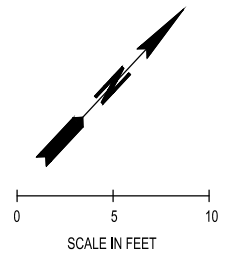
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DRAWING No.: ADA-1
SHEET No.: 35 OF 52

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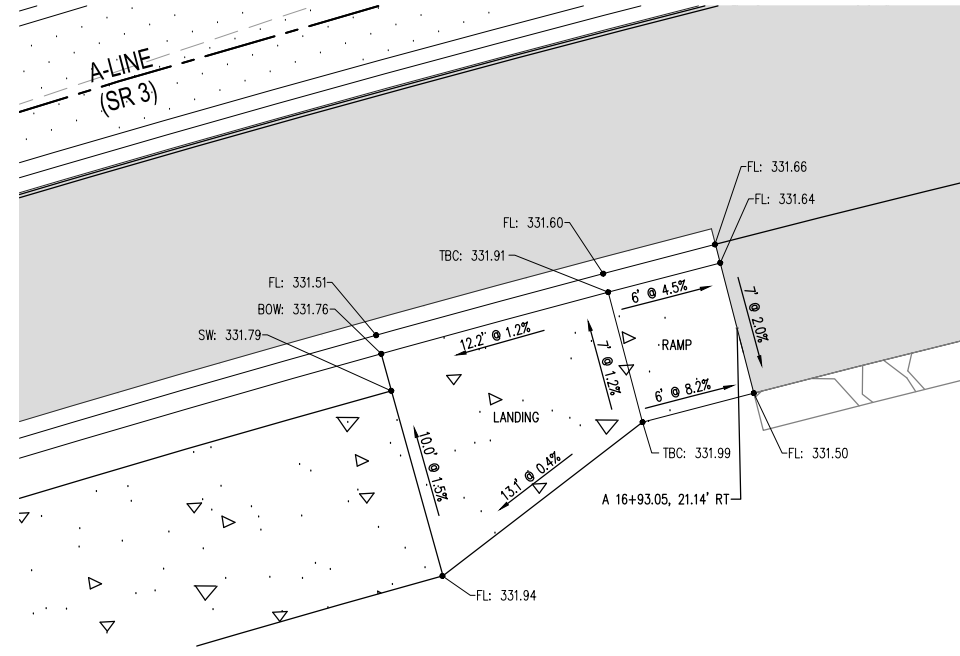
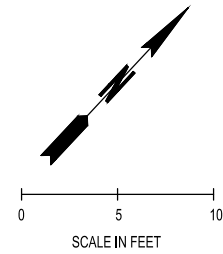
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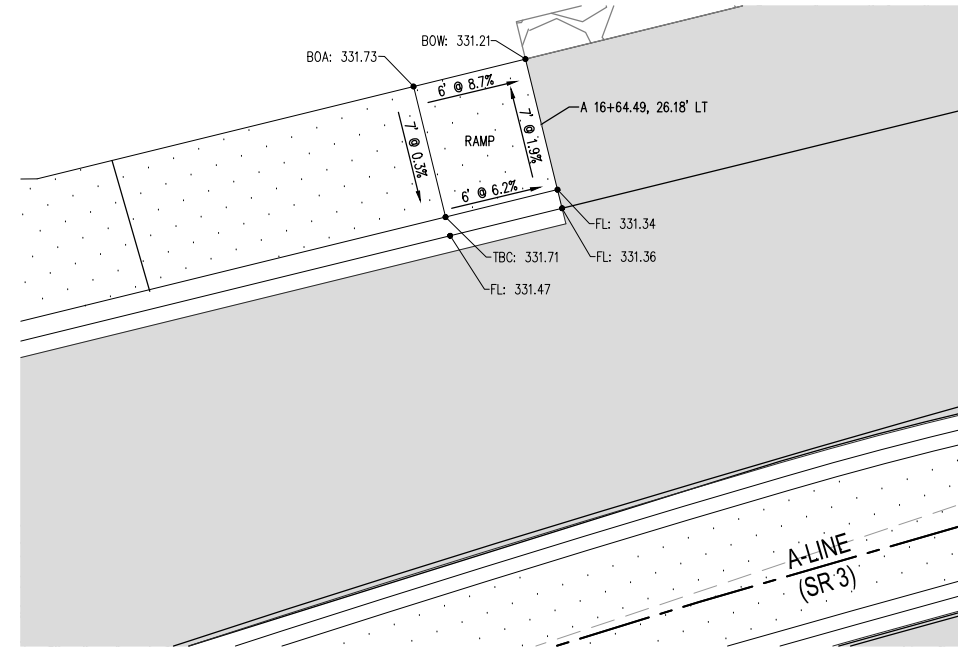
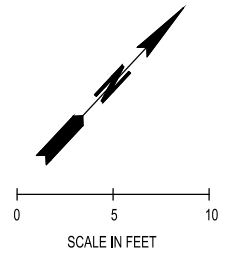
R6 NORTHWEST OF SR 3 AND LOG YARD RD INTERSECTION

ABBREVIATIONS

BOA	BACK OF TRUCK APRON
BOW	BACK OF WALK
FL	FLOW LINE
FG	FINISHED GRADE
TBC	TOP BACK OF CURB



R7 NORTHEAST OF SR 3 AND LOG YARD RD INTERSECTION



R8 NORTHEAST OF SR 3 AND LOG YARD RD INTERSECTION

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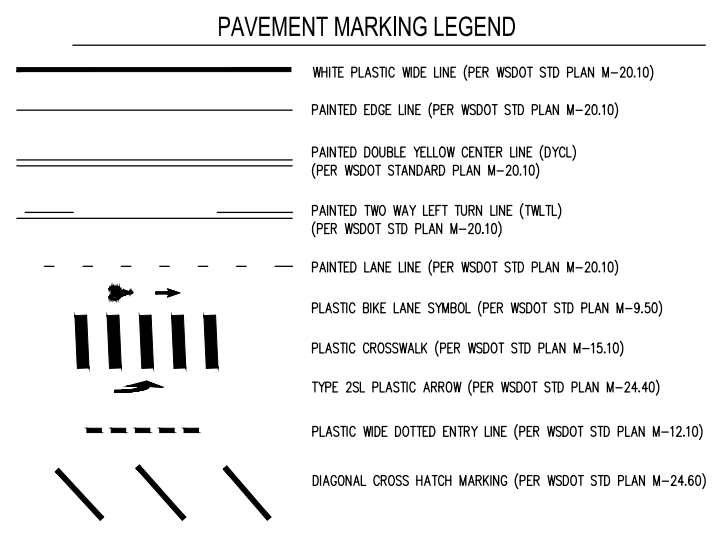
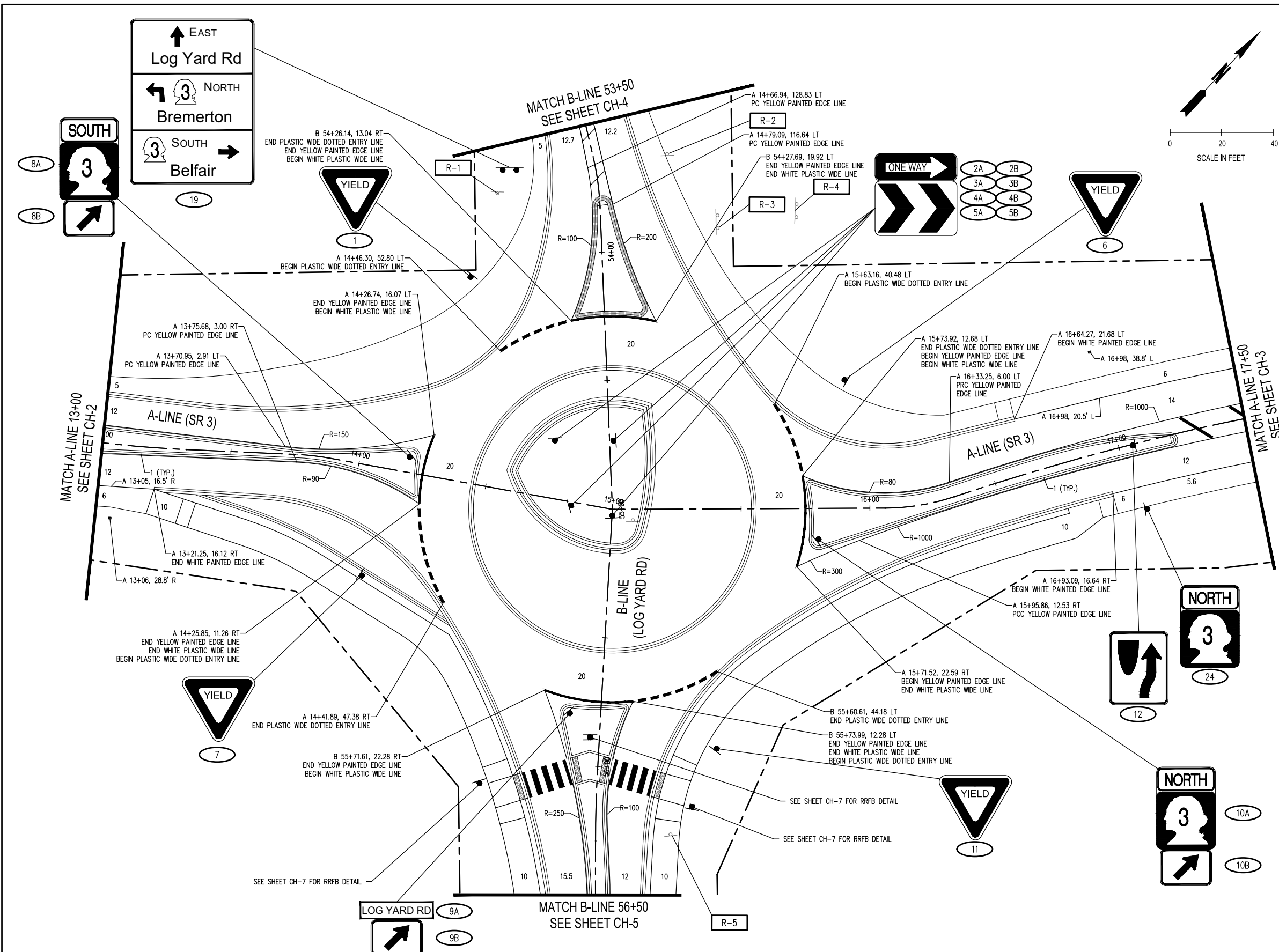
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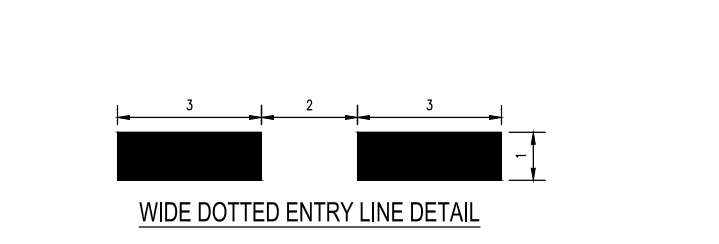
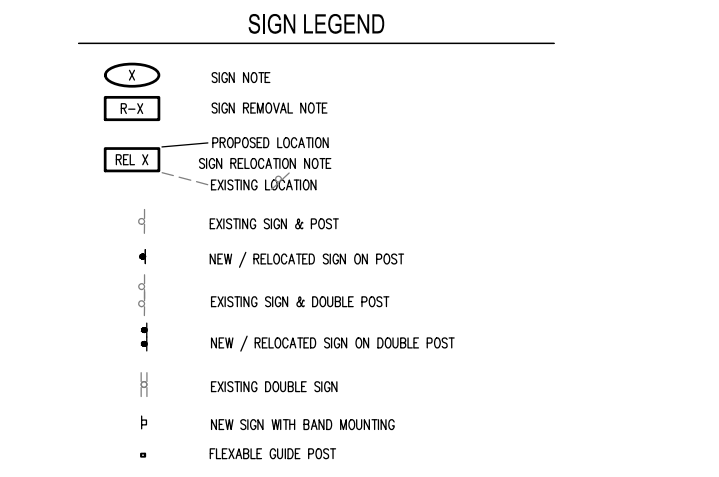
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- ### PAVEMENT MARKING NOTES
1. ALL PLASTIC SHALL BE TYPE D1 MMA EXTRUDED PLASTIC PER WSDOT STANDARD SPECIFICATIONS SECTION 9-34.
 2. SEE WSDOT STD PLAN M-20.30 AND M-20.40 FOR INSTALLATION OF SUPPLEMENTAL RAISED PAVEMENT MARKINGS.
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 STATE OF WASHINGTON
 REGISTERED PROFESSIONAL ENGINEER
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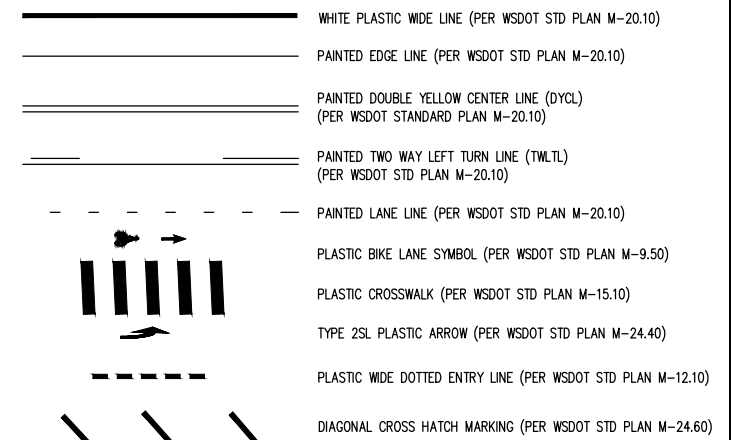
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 SR-3 AND LOG YARD RD INTERSECTION

CHANNELIZATION AND SIGNAGE PLAN

DRAWING No.: CH-1
 SHEET No.: 37 OF 52

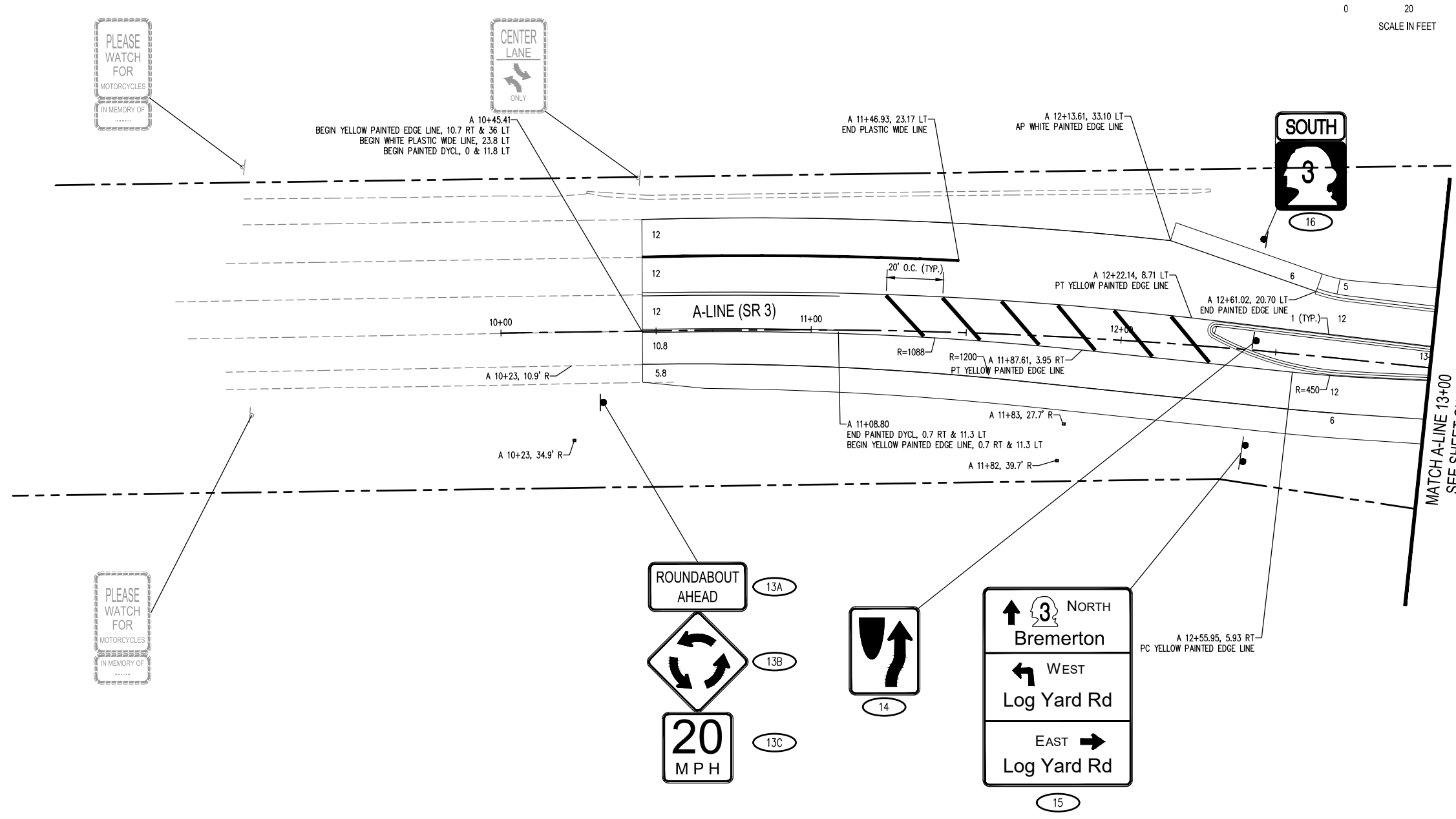
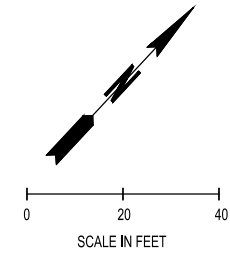
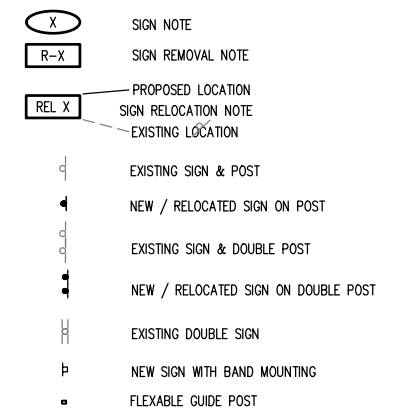
PAVEMENT MARKING LEGEND



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SIGN LEGEND

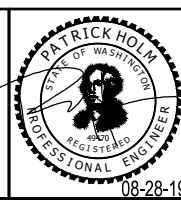


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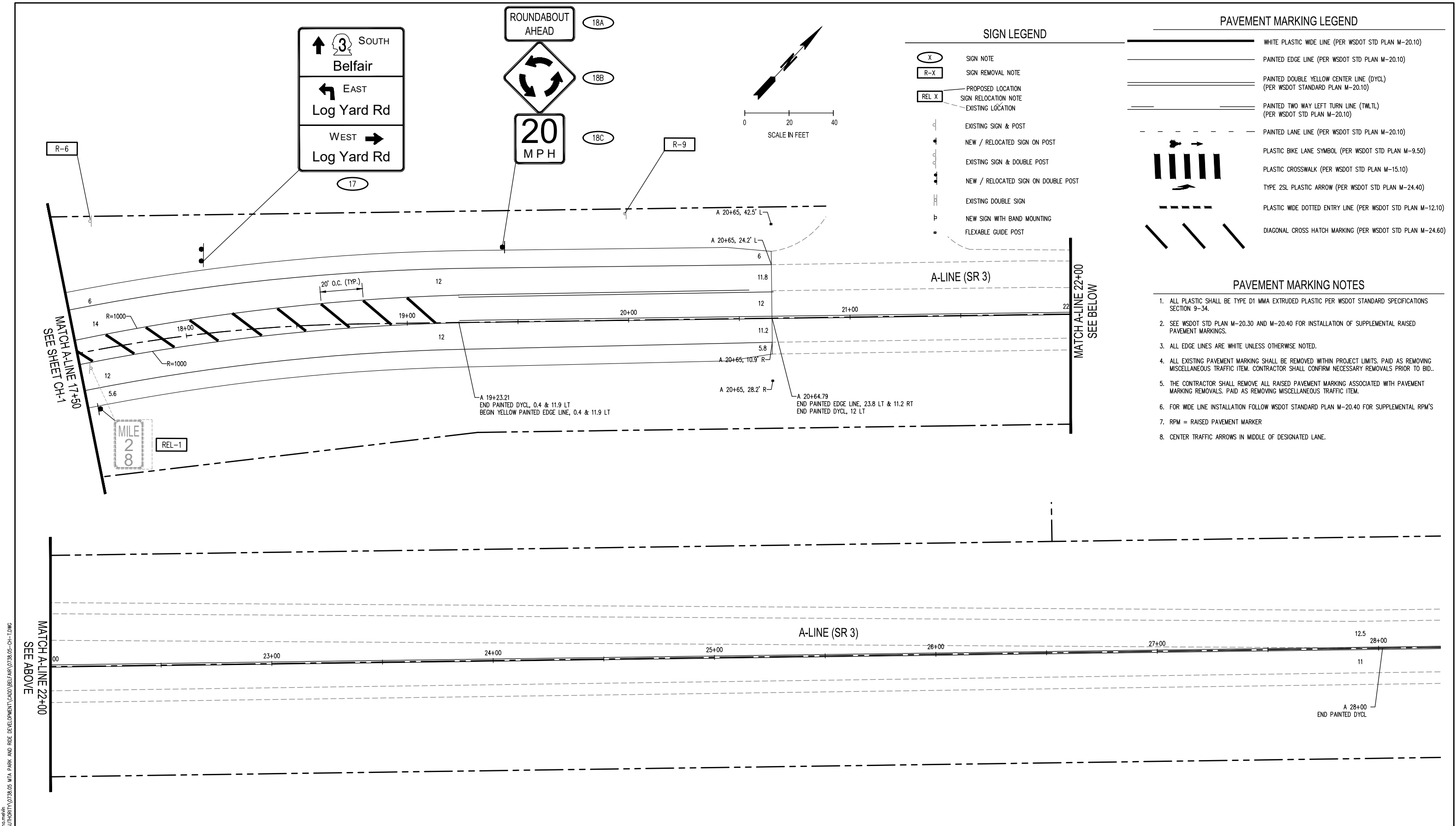
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DRAWING No.: CH-2
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SIGN LEGEND

- (X) SIGN NOTE
- (R-X) SIGN REMOVAL NOTE
- REL X PROPOSED LOCATION
SIGN RELOCATION NOTE
EXISTING LOCATION
- EXISTING SIGN & POST
- NEW / RELOCATED SIGN ON POST
- EXISTING SIGN & DOUBLE POST
- NEW / RELOCATED SIGN ON DOUBLE POST
- EXISTING DOUBLE SIGN
- NEW SIGN WITH BAND MOUNTING
- FLEXIBLE GUIDE POST

PAVEMENT MARKING LEGEND

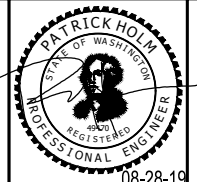
- WHITE PLASTIC WIDE LINE (PER WSDOT STD PLAN M-20.10)
- PAINTED EDGE LINE (PER WSDOT STD PLAN M-20.10)
- PAINTED DOUBLE YELLOW CENTER LINE (DYCL) (PER WSDOT STANDARD PLAN M-20.10)
- PAINTED TWO WAY LEFT TURN LINE (TWLTL) (PER WSDOT STD PLAN M-20.10)
- PAINTED LANE LINE (PER WSDOT STD PLAN M-20.10)
- PLASTIC BIKE LANE SYMBOL (PER WSDOT STD PLAN M-9.50)
- PLASTIC CROSSWALK (PER WSDOT STD PLAN M-15.10)
- TYPE 2SL PLASTIC ARROW (PER WSDOT STD PLAN M-24.40)
- PLASTIC WIDE DOTTED ENTRY LINE (PER WSDOT STD PLAN M-12.10)
- DIAGONAL CROSS HATCH MARKING (PER WSDOT STD PLAN M-24.60)

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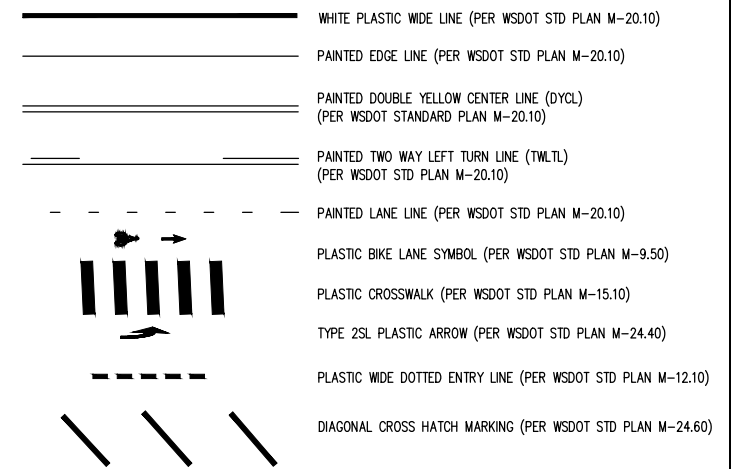
PROJECT NAME:

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 SR-3 AND LOG YARD RD INTERSECTION

CHANNELIZATION AND SIGNAGE PLAN

DRAWING No.: CH-3
 SHEET No.: 39 OF 52

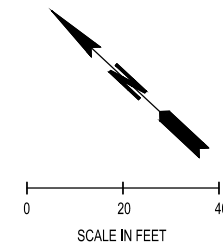
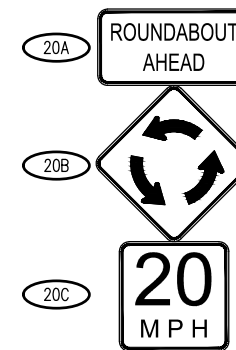
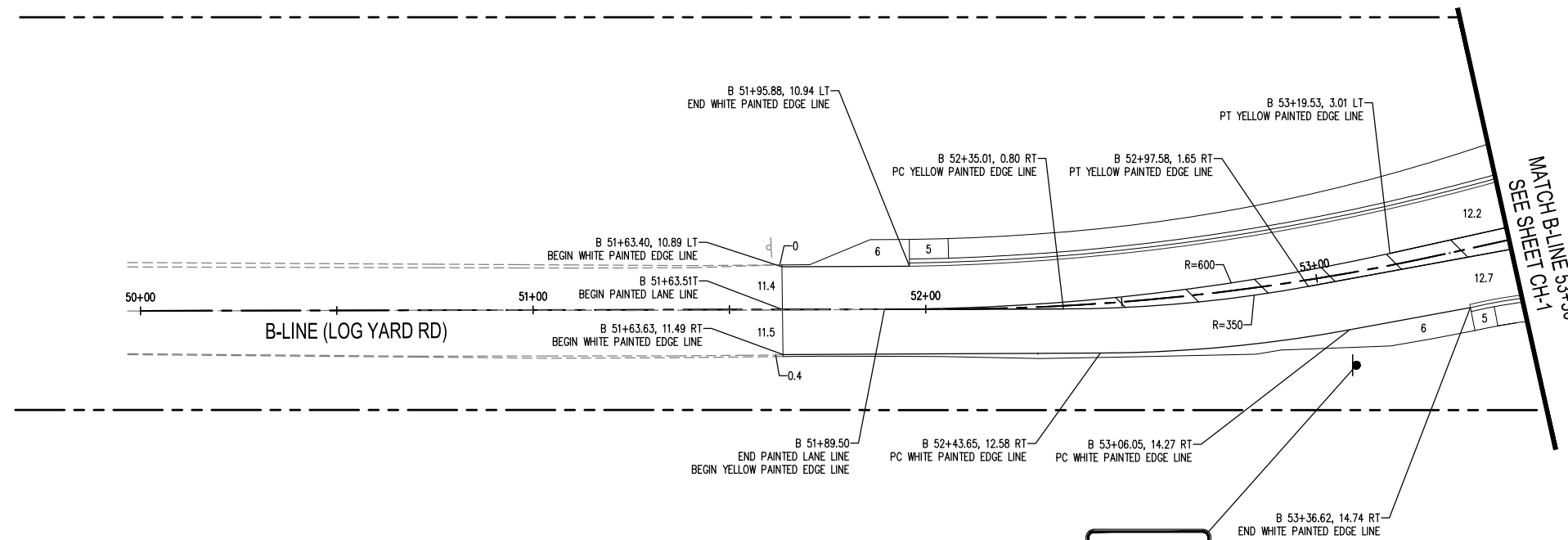
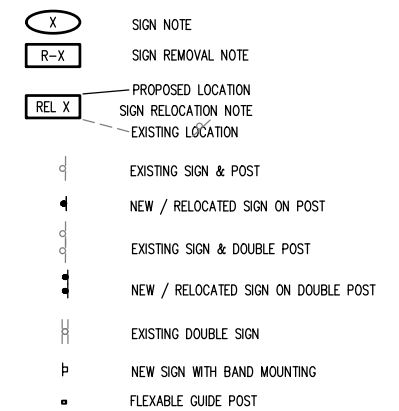
PAVEMENT MARKING LEGEND



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SIGN LEGEND

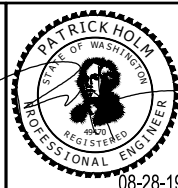


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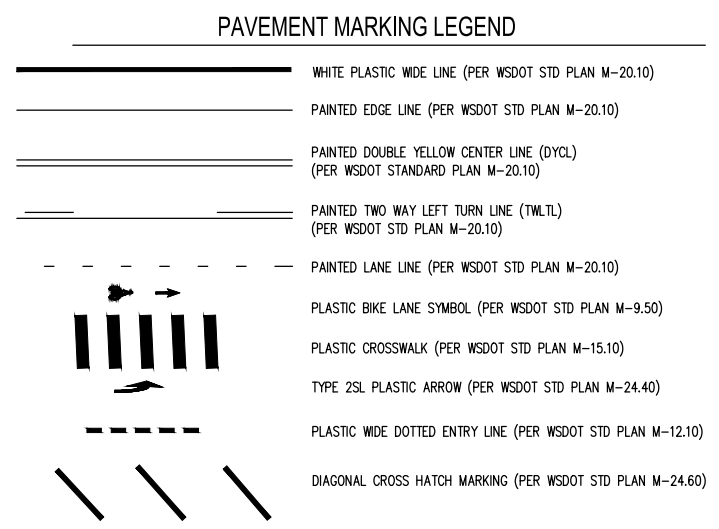
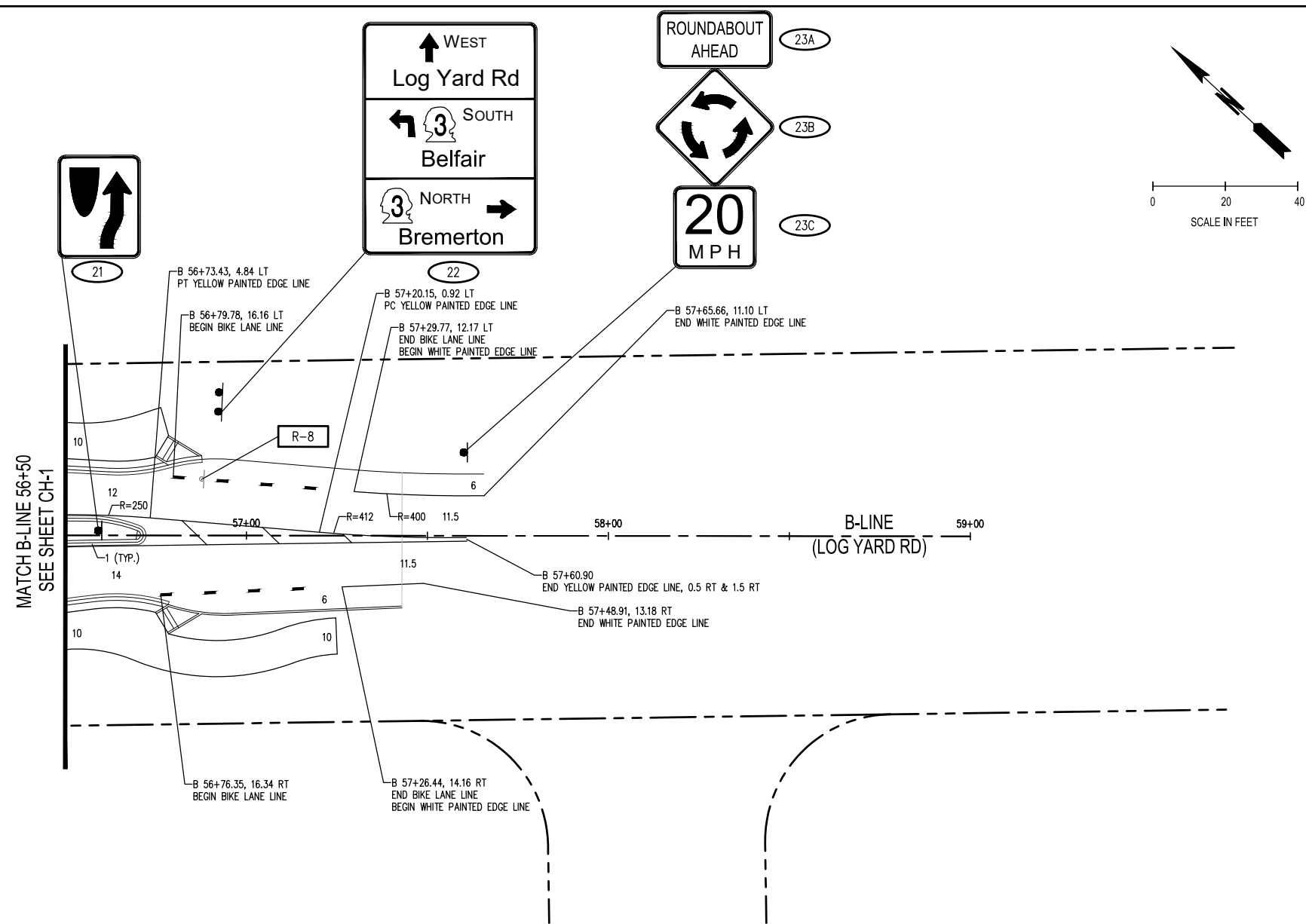
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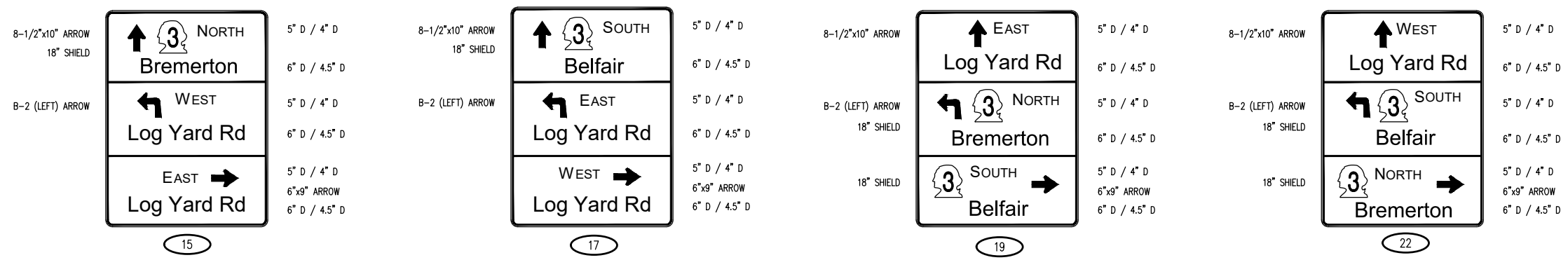
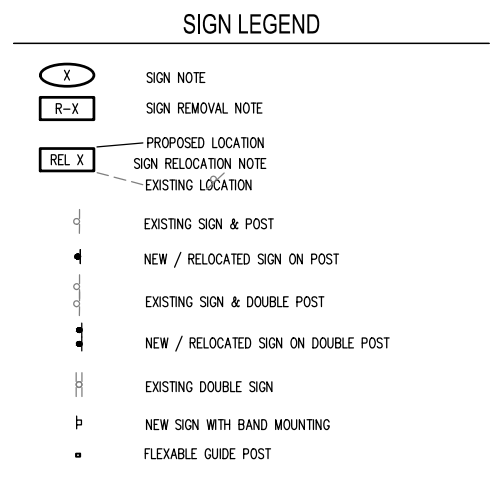
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CHANNELIZATION AND SIGNAGE PLAN

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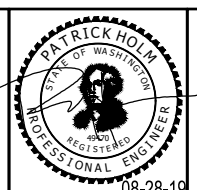


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CHANNELIZATION AND SIGNAGE PLAN

DRAWING No.: CH-5
 SHEET No.: 41 OF 52

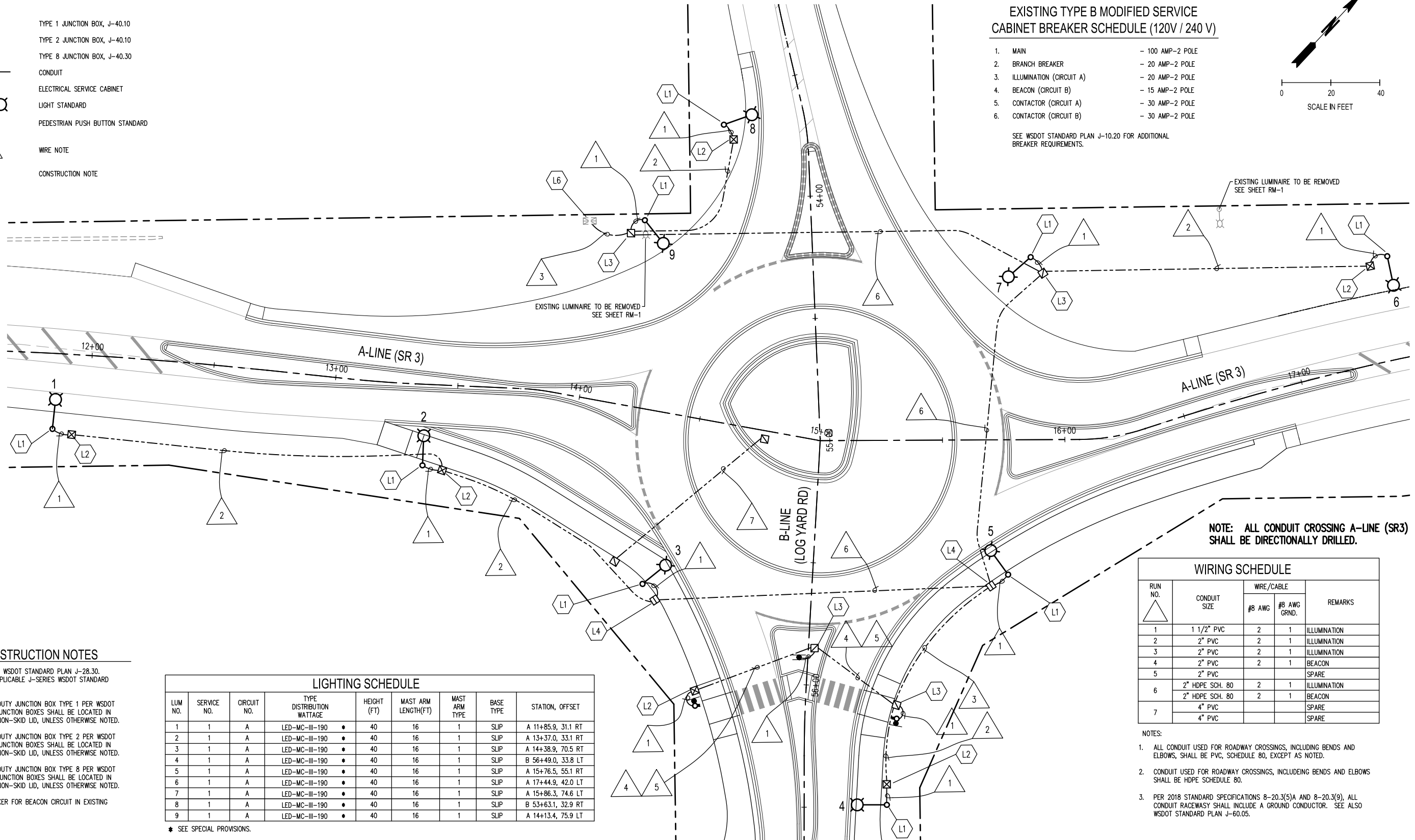
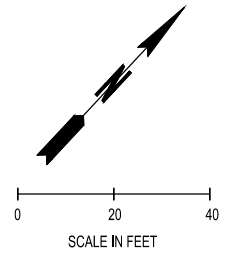
LEGEND

EXISTING	NEW	
		TYPE 1 JUNCTION BOX, J-40.10
		TYPE 2 JUNCTION BOX, J-40.10
		TYPE 8 JUNCTION BOX, J-40.30
		CONDUIT
		ELECTRICAL SERVICE CABINET
		LIGHT STANDARD
		PEDESTRIAN PUSH BUTTON STANDARD
		WIRE NOTE
		CONSTRUCTION NOTE

**EXISTING TYPE B MODIFIED SERVICE
CABINET BREAKER SCHEDULE (120V / 240 V)**

1. MAIN	- 100 AMP-2 POLE
2. BRANCH BREAKER	- 20 AMP-2 POLE
3. ILLUMINATION (CIRCUIT A)	- 20 AMP-2 POLE
4. BEACON (CIRCUIT B)	- 15 AMP-2 POLE
5. CONTACTOR (CIRCUIT A)	- 30 AMP-2 POLE
6. CONTACTOR (CIRCUIT B)	- 30 AMP-2 POLE

SEE WSDOT STANDARD PLAN J-10.20 FOR ADDITIONAL BREAKER REQUIREMENTS.



EXISTING LUMINAIRE TO BE REMOVED
SEE SHEET RM-1

NOTE: ALL CONDUIT CROSSING A-LINE (SR3)
SHALL BE DIRECTIONALLY DRILLED.

ILLUMINATION CONSTRUCTION NOTES

- L1** INSTALL FOUNDATION TYPE A PER WSDOT STANDARD PLAN J-28.30. INSTALL LIGHT STANDARD PER APPLICABLE J-SERIES WSDOT STANDARD PLAN.
- L2** INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX TYPE 1 PER WSDOT STANDARD PLAN J-40.10. ALL JUNCTION BOXES SHALL BE LOCATED IN THE BACK OF SIDEWALK WITH A NON-SKID LID, UNLESS OTHERWISE NOTED.
- L3** INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX TYPE 2 PER WSDOT STANDARD PLAN J-40.10. ALL JUNCTION BOXES SHALL BE LOCATED IN THE BACK OF SIDEWALK WITH A NON-SKID LID, UNLESS OTHERWISE NOTED.
- L4** INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX TYPE 8 PER WSDOT STANDARD PLAN J-40.30. ALL JUNCTION BOXES SHALL BE LOCATED IN THE BACK OF SIDEWALK WITH A NON-SKID LID, UNLESS OTHERWISE NOTED.
- L6** INSTALL A 2 POLE 15 AMP BREAKER FOR BEACON CIRCUIT IN EXISTING SERVICE PANEL.

LUM NO.	SERVICE NO.	CIRCUIT NO.	TYPE DISTRIBUTION WATTAGE	HEIGHT (FT)	MAST ARM LENGTH(FT)	MAST ARM TYPE	BASE TYPE	STATION, OFFSET
1	1	A	LED-MC-III-190	40	16	1	SLIP	A 11+85.9, 31.1 RT
2	1	A	LED-MC-III-190	40	16	1	SLIP	A 13+37.0, 33.1 RT
3	1	A	LED-MC-III-190	40	16	1	SLIP	A 14+38.9, 70.5 RT
4	1	A	LED-MC-III-190	40	16	1	SLIP	B 56+49.0, 33.8 LT
5	1	A	LED-MC-III-190	40	16	1	SLIP	A 15+76.5, 55.1 RT
6	1	A	LED-MC-III-190	40	16	1	SLIP	A 17+44.9, 42.0 LT
7	1	A	LED-MC-III-190	40	16	1	SLIP	A 15+86.3, 74.6 LT
8	1	A	LED-MC-III-190	40	16	1	SLIP	B 53+63.1, 32.9 RT
9	1	A	LED-MC-III-190	40	16	1	SLIP	A 14+13.4, 75.9 LT

* SEE SPECIAL PROVISIONS.

WIRING SCHEDULE

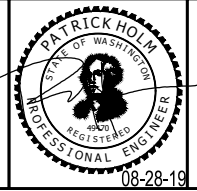
RUN NO.	CONDUIT SIZE	WIRE/CABLE		REMARKS
		#8 AWG	#8 AWG GRND.	
1	1 1/2" PVC	2	1	ILLUMINATION
2	2" PVC	2	1	ILLUMINATION
3	2" PVC	2	1	ILLUMINATION
4	2" PVC	2	1	BEACON
5	2" PVC			SPARE
6	2" HDPE SCH. 80	2	1	ILLUMINATION
	2" HDPE SCH. 80	2	1	BEACON
7	4" PVC			SPARE
	4" PVC			SPARE

- NOTES:
- ALL CONDUIT USED FOR ROADWAY CROSSINGS, INCLUDING BENDS AND ELBOWS, SHALL BE PVC, SCHEDULE 80, EXCEPT AS NOTED.
 - CONDUIT USED FOR ROADWAY CROSSINGS, INCLUDING BENDS AND ELBOWS SHALL BE HDPE SCHEDULE 80.
 - PER 2018 STANDARD SPECIFICATIONS 8-20.3(5)A AND 8-20.3(9), ALL CONDUIT RACEWAYS SHALL INCLUDE A GROUND CONDUCTOR. SEE ALSO WSDOT STANDARD PLAN J-60.05.

Aug 28, 2019 4:18:04pm - User: kemo.melvin
K:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-IL-1.DWG

Δ	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH	M. JOHNSON	JOB No.: 0738.05
				CHECKED BY: P. HOLM	DRAWING FILE No.: 0738.05-IL-1

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED



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PROJECT NAME:

MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

ILLUMINATION PLAN

DRAWING No.: IL-1
SHEET No.: 44 OF 52

NOTES - APPLICABLE TO ALL TRAFFIC CONTROL SHEETS

MOTORCYCLES USE EXTREME CAUTION SIGNS SHALL BE INSTALLED THROUGHOUT THE WORKZONE (W21-1701) AND FOR EACH SIGNIFICANT INTERSECTION OR OFF RAMP WHEN THE FOLLOWING ROADWAY CONDITIONS EXIST:

- GROOVED PAVEMENT (W8-2001)
- ABRUPT LANE EDGE (W21-801)
- NO SHOULDER (W8-1801)
- LOOSE GRAVEL (W8-7)

SPECIFIC SIGNS FOR EACH OF THE CONDITIONS NOTED SHALL ALSO BE INSTALLED AS REQUIRED.

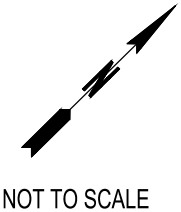
WSDOT PROJECT INSPECTOR IS RESPONSIBLE FOR NOTIFYING THE TRAFFIC MANAGEMENT CENTER OF TRAFFIC CONTROL AND ANY COORDINATION WITH MAINTENANCE IF NEEDED.

MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES OR PROVIDE ALTERNATE ROUTE.

FLAGGERS SHALL STOP ALL TRAFFIC FOR PEDESTRIANS TO CROSS HIGHWAY.

ALL CONFLICTING EXISTING SIGNS SHALL BE COVERED, AS DETERMINED BY THE ENGINEER OR WSDOT INSPECTOR.

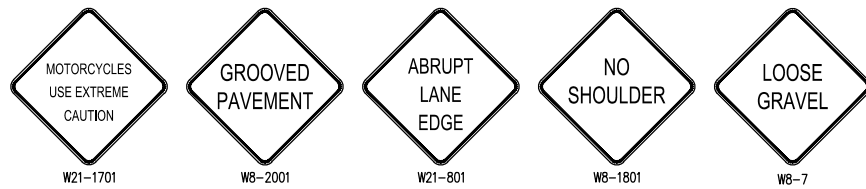
SEE STD. PLAN K-80.10 FOR CLASS A CONSTRUCTION SIGN INSTALLATION.



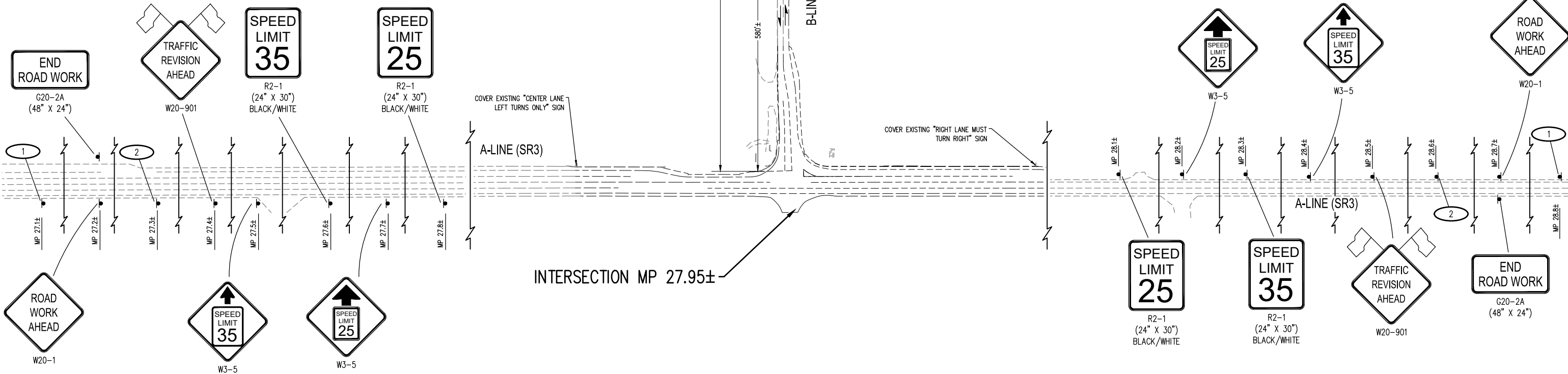
NOT TO SCALE

NOTES:

1. PLACE A W20-1 "ROAD WORK AHEAD" SIGN IN ADVANCE OF ALL INTERSECTION APPROACHES THAT FALL WITHIN TRAFFIC CONTROL SIGNING LIMITS.
2. ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE SHOWN. ALL SIGNS SHALL BE BLACK ON ORANGE UNLESS OTHERWISE SHOWN.



DURING WORKING AND NON-WORKING HOURS THESE SIGNS AND THE SHOULDER CLOSURE TAPERING ARE REQUIRED TO PROTECT THE DROP-OFF. COORDINATE/CONFIRM WITH WSDOT INSPECTOR WHICH SIGNS ARE NEEDED.



CLASS A SIGNING

Aug 28, 2019 4:18:48pm - User: kono.melvin
K:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-TC-01-TDING

Δ	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH		

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED



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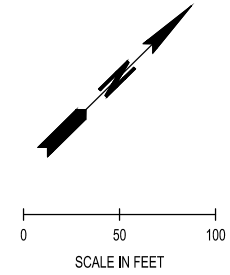
MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION
TRAFFIC CONTROL PLAN

DRAWING No.: TC-01
SHEET No.: 46 OF 52

LEGEND

- ○ ○ CHANNELIZING DEVICES (TRAFFIC SAFETY DRUMS)
- ▨ WORK AREA
- ▭ TEMPORARY PAVEMENT
- ⊠ CLASS B SIGN LOCATION - TEMPORARY MOUNT
- ⊡ CLASS A SIGN LOCATION - POST MOUNT
- ➔ DIRECTIONAL ARROW
- ▧ PROTECTIVE VEHICLE WITH TRANSPORTABLE ATTENUATOR - REQUIRED (MAY BE A WORK VEHICLE)
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- ▷▷▷ ARROW PANEL

LANE WIDTH (FEET)	MINIMUM TAPER LENGTH = L IN FEET									
	POSTED SPEED (MPH)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840



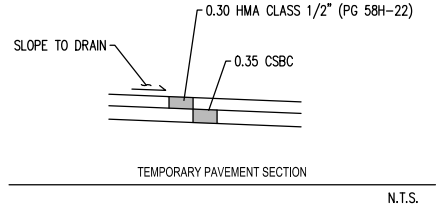
SIGN SPACING = X (FEET) (1)		
FREWAYS & EXPRESSWAYS	55/70 MPH	1500'± (OR AS PER MUTCD)
RURAL HIGHWAYS	60/65 MPH	800'±
RURAL ROADS	45/55 MPH	500'±
RURAL ROADS, URBAN ARTERIAL	35/40 MPH	350'±
RURAL ROADS, URBAN ARTERIAL RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)

PCMS	
1	2
RIGHT LANE CLOSED	1/2 MILE AHEAD
2 SECONDS	2 SECONDS

FIELD LOCATE 1/2 MILE ± PRIOR TO W20-1 SIGN (CONCEPTUAL LOCATION SHOWN, COORDINATE W/ WSDOT FOR ACTUAL LOCATION)

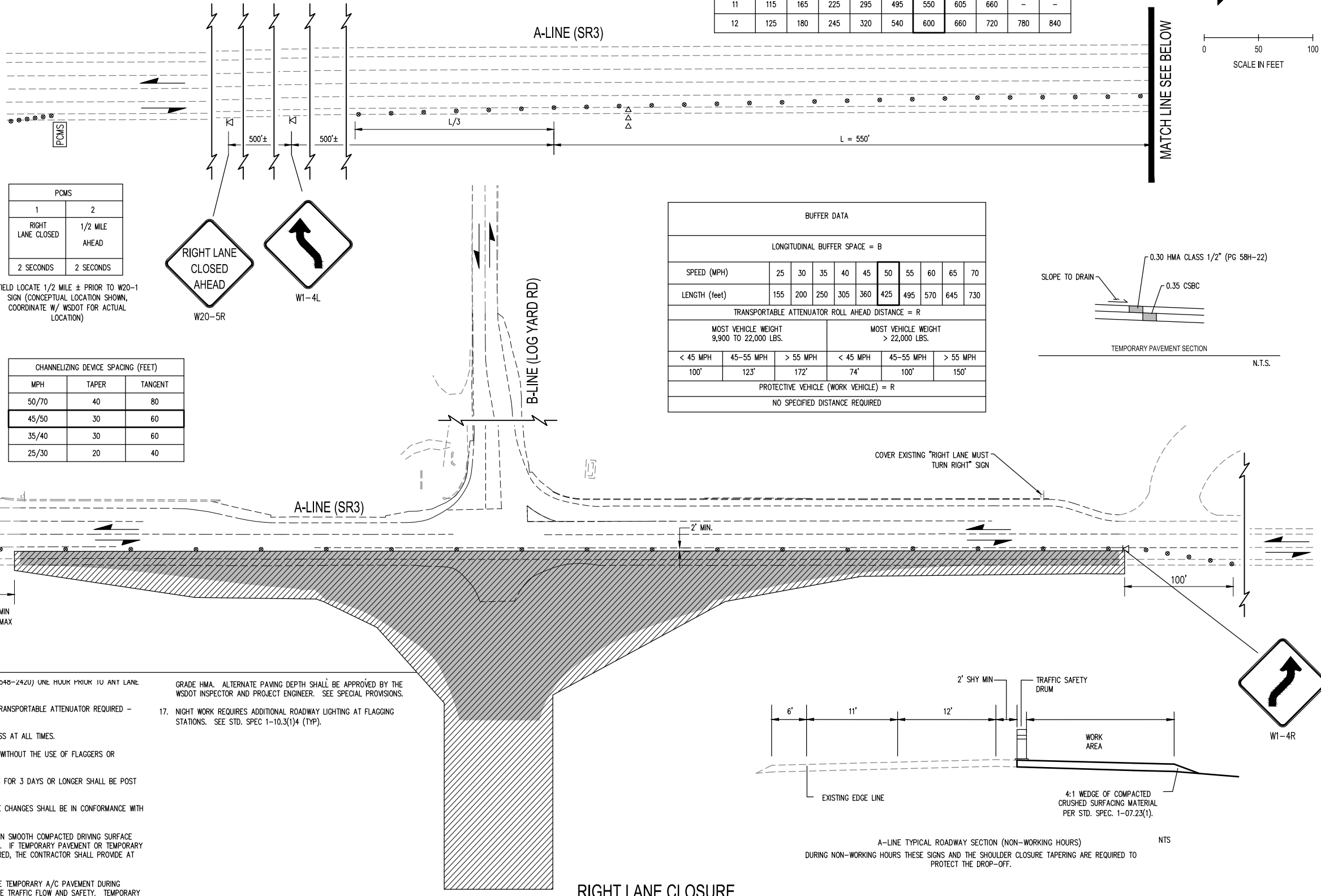
CHANNELIZING DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/70	40	80
45/50	30	60
35/40	30	60
25/30	20	40

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
MOST VEHICLE WEIGHT 9,900 TO 22,000 LBS.					MOST VEHICLE WEIGHT > 22,000 LBS.					
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH					
100'	123'	172'	74'	100'	150'					
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										



MATCH LINE SEE ABOVE

MATCH LINE SEE BELOW



GENERAL NOTES

- SEE SHEET TC-01 FOR CLASS A SIGNING.
- WHEN USED, THE DEVICE SPACING FOR THE DOWNSTREAM TAPER SHOULD BE 20' O.C.
- ALL CONFLICTING EXISTING SIGNS SHALL BE COVERED, AS DETERMINED BY THE ENGINEER OR WSDOT INSPECTOR.
- TYPICAL APPLICATION SHOWN. ADJUST SIGNS AND LOCATIONS TO FIT SITE CONDITIONS.
- EXTEND CHANNELIZING DEVICE TAPERS ACROSS SHOULDER.
- SEE SPECIAL PROVISIONS: "PUBLIC CONVENIENCE AND SAFETY-CONSTRUCTION UNDER TRAFFIC: FOR WORK HOUR RESTRICTIONS."
- EXTEND AND/OR REDUCE SHOULDER CLOSURES AND WORK AREAS AS NECESSARY.
- NO ENCRoACHMENT ON TRAVELED LANE. IF ENCRoACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
- CALL ULYMPIC RADIUS (253-545-2420) ONE HOUR PRIOR TO ANY LANE RESTRICTIONS.
- PROTECTIVE VEHICLE WITH TRANSPORTABLE ATTENUATOR REQUIRED - MAY BE A WORK VEHICLE.
- MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.
- THIS PLAN SHALL OPERATE WITHOUT THE USE OF FLAGGERS OR SPOTTERS.
- SIGNS TO BE LEFT IN PLACE FOR 3 DAYS OR LONGER SHALL BE POST MOUNTED.
- ALL DROP-OFFS AND GRADE CHANGES SHALL BE IN CONFORMANCE WITH STD. SPEC. 1-07.23(1).
- CONTRACTOR SHALL MAINTAIN SMOOTH COMPACTED DRIVING SURFACE THROUGHOUT CONSTRUCTION. IF TEMPORARY PAVEMENT OR TEMPORARY PAVEMENT REPAIR IS REQUIRED, THE CONTRACTOR SHALL PROVIDE AT CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL PROVIDE TEMPORARY A/C PAVEMENT DURING CONSTRUCTION TO FACILITATE TRAFFIC FLOW AND SAFETY. TEMPORARY
- GRADE HMA. ALTERNATE PAVING DEPTH SHALL BE APPROVED BY THE WSDOT INSPECTOR AND PROJECT ENGINEER. SEE SPECIAL PROVISIONS.
- NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE STD. SPEC 1-10.3(1)4 (TYP).

RIGHT LANE CLOSURE

Aug 28, 2019 4:26:13pm - User: kemo.melvin
K:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-TC-02-T.DWG

Δ	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH		

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED

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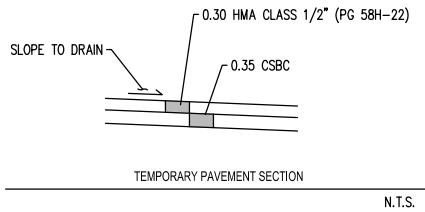
MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

TRAFFIC CONTROL PLAN

DRAWING No.: TC-02
SHEET No.: 47 OF 52

LEGEND

- ○ ○ CHANNELIZING DEVICES (TRAFFIC SAFETY DRUMS)
- ▨ WORK AREA
- ▭ TEMPORARY PAVEMENT
- ▷ CLASS B SIGN LOCATION - TEMPORARY MOUNT
- ◻ CLASS A SIGN LOCATION - POST MOUNT
- DIRECTIONAL ARROW
- ▭ PROTECTIVE VEHICLE WITH TRANSPORTABLE ATTENUATOR - REQUIRED (MAY BE A WORK VEHICLE)
- ▷▷ ARROW PANEL

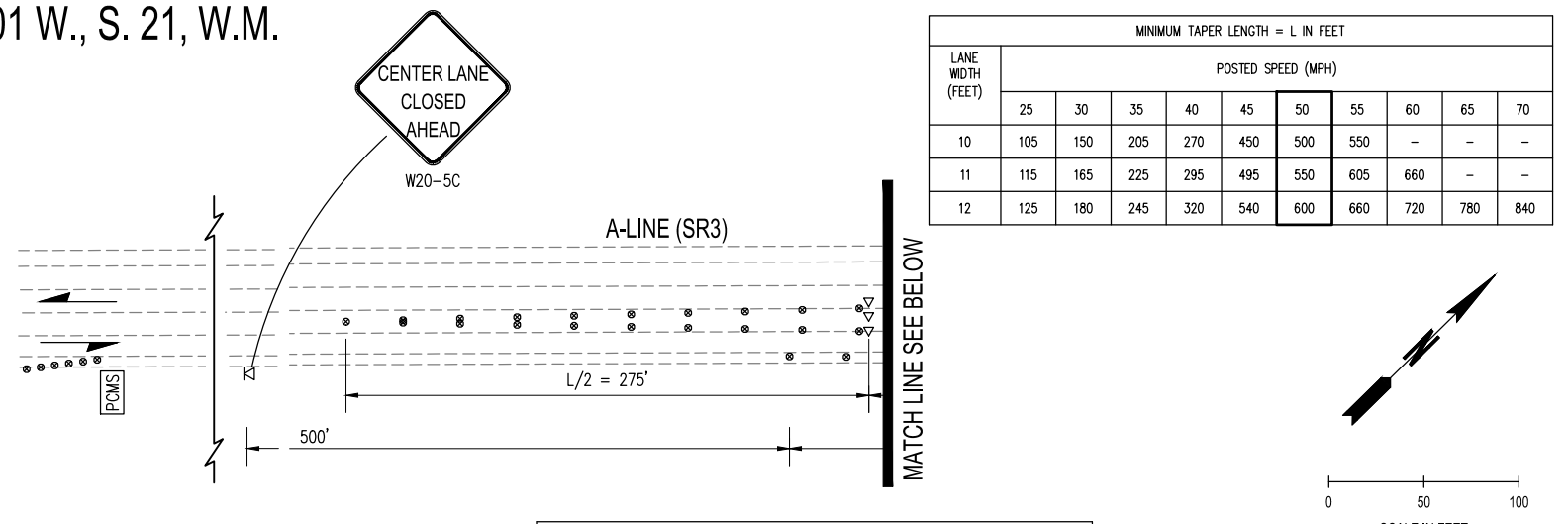


LANE WIDTH (FEET)	MINIMUM TAPER LENGTH = L IN FEET									
	POSTED SPEED (MPH)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

SIGN SPACING = X (FEET) (1)		
FREWAYS & EXPRESSWAYS	55/70 MPH	1500'± (OR AS PER MUTCD)
RURAL HIGHWAYS	60/65 MPH	800'±
RURAL ROADS	45/55 MPH	500'±
RURAL ROADS, URBAN ARTERIAL	35/40 MPH	350'±
RURAL ROADS, URBAN ARTERIAL RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)

CHANNELIZING DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/70	40	80
45/50	30	60
35/40	30	60
25/30	20	40

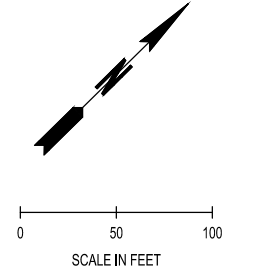
- ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS, AND DRIVEWAYS.
- THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



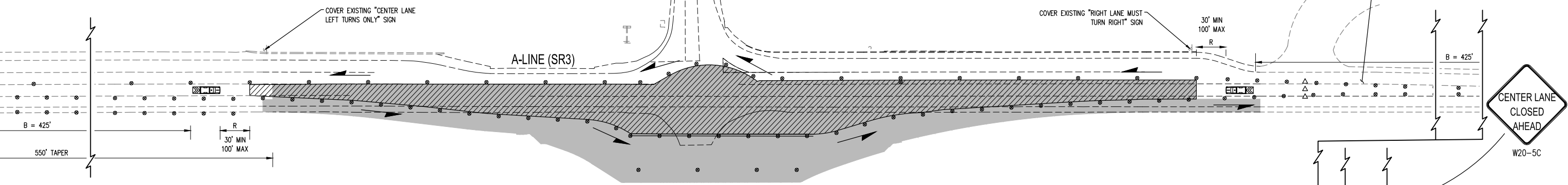
PCMS	
1	2
CENTER LANE CLOSED	NO LEFT TURNING
2 SECONDS	2 SECONDS

FIELD LOCATE 1/2 MILE ± PRIOR TO W20-1 SIGN (CONCEPTUAL LOCATION SHOWN, COORDINATE W/ WSDOT FOR ACTUAL LOCATION)

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
MOST VEHICLE WEIGHT 9,900 TO 22,000 LBS.					MOST VEHICLE WEIGHT > 22,000 LBS.					
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH					
100'	123'	172'	74'	100'	150'					
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										

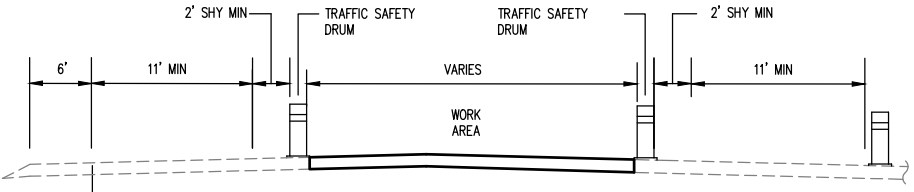


MATCH LINE SEE ABOVE



GENERAL NOTES

- SEE SHEET TC-01 FOR CLASS A SIGNING.
- WHEN USED, THE DEVICE SPACING FOR THE DOWNSTREAM TAPER SHOULD BE 20' O.C.
- ALL CONFLICTING EXISTING SIGNS SHALL BE COVERED, AS DETERMINED BY THE ENGINEER OR WSDOT INSPECTOR.
- TYPICAL APPLICATION SHOWN. ADJUST SIGNS AND LOCATIONS TO FIT SITE CONDITIONS.
- EXTEND CHANNELIZING DEVICE TAPERS ACROSS SHOULDER.
- SEE SPECIAL PROVISIONS: "PUBLIC CONVENIENCE AND SAFETY-CONSTRUCTION UNDER TRAFFIC: FOR WORK HOUR RESTRICTIONS."
- EXTEND AND/OR REDUCE SHOULDER CLOSURES AND WORK AREAS AS NECESSARY.
- NO ENCROACHMENT ON TRAVELED LANE. IF ENCROACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
- CALL ULYMPIC RADIUS (253-545-2420) ONE HOUR PRIOR TO ANY LANE RESTRICTIONS.
- PROTECTIVE VEHICLE WITH TRANSPORTABLE ATTENUATOR REQUIRED - MAY BE A WORK VEHICLE.
- MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.
- THIS PLAN SHALL OPERATE WITHOUT THE USE OF FLAGGERS OR SPOTTERS.
- SIGNS TO BE LEFT IN PLACE FOR 3 DAYS OR LONGER SHALL BE POST MOUNTED.
- ALL DROP-OFFS AND GRADE CHANGES SHALL BE IN CONFORMANCE WITH STD. SPEC. 1-07.23(1).
- CONTRACTOR SHALL MAINTAIN SMOOTH COMPACTED DRIVING SURFACE THROUGHOUT CONSTRUCTION. IF TEMPORARY PAVEMENT OR TEMPORARY PAVEMENT REPAIR IS REQUIRED, THE CONTRACTOR SHALL PROVIDE AT CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL PROVIDE TEMPORARY A/C PAVEMENT DURING CONSTRUCTION TO FACILITATE TRAFFIC FLOW AND SAFETY. TEMPORARY
- GRADE HMA. ALTERNATE PAVING DEPTH SHALL BE APPROVED BY THE WSDOT INSPECTOR AND PROJECT ENGINEER. SEE SPECIAL PROVISIONS.
- NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE STD. SPEC 1-10.3(1)4 (TYP).



A-LINE TYPICAL ROADWAY SECTION (NON-WORKING HOURS) DURING NON-WORKING HOURS THESE SIGNS AND THE SHOULDER CLOSURE TAPERING ARE REQUIRED TO PROTECT THE DROP-OFF.

PCMS	
1	2
CENTER LANE CLOSED	NO LEFT TURNING
2 SECONDS	2 SECONDS

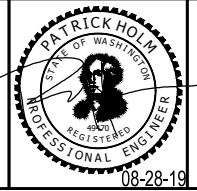
FIELD LOCATE 1/2 MILE ± PRIOR TO W20-1 SIGN (CONCEPTUAL LOCATION SHOWN, COORDINATE W/ WSDOT FOR ACTUAL LOCATION)

CENTER LANE CLOSURE

Aug 28, 2019 4:26:39pm - User: krommelin, K:\PROJECTS\0328 MASON TRANSIT AUTHORITY\0328.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-TC-03-TD.MG

Δ	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH	M. JOHNSON	JOB No.: 0738.05
				CHECKED BY: P. HOLM	DRAWING FILE No.: 0738.05-TC-03-T

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED



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PROJECT NAME:

MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION
TRAFFIC CONTROL PLAN

DRAWING No.: TC-03
SHEET No.: 48 OF 52

LEGEND

- ○ ○ CHANNELIZING DEVICES (TRAFFIC SAFETY DRUMS)
- ▨ WORK AREA
- ▭ TEMPORARY PAVEMENT
- ⊠ CLASS B SIGN LOCATION - TEMPORARY MOUNT
- ⊡ CLASS A SIGN LOCATION - POST MOUNT
- ➔ DIRECTIONAL ARROW
- ▭ PROTECTIVE VEHICLE WITH TRANSPORTABLE ATTENUATOR - REQUIRED (MAY BE A WORK VEHICLE)
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN

MATCH LINE SEE THIS SHEET



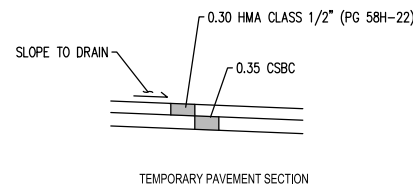
R4-7B
(24" X 30")
BLACK/WHITE



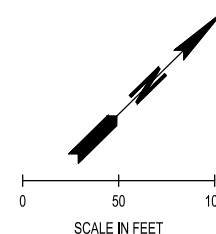
W21-5

PCMS 1	
1	2
CENTER LANE CLOSED	1 MILE AHEAD
2 SECONDS	2 SECONDS

FIELD LOCATE 1 MILE ± PRIOR TO W20-1 SIGN (CONCEPTUAL LOCATION SHOWN, COORDINATE W/ WSDOT FOR ACTUAL LOCATION)



N.T.S.



BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
MOST VEHICLE WEIGHT 9,900 TO 22,000 LBS.						MOST VEHICLE WEIGHT > 22,000 LBS.				
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH					
100'	123'	172'	74'	100'	150'					
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										

MATCH LINE SEE THIS SHEET

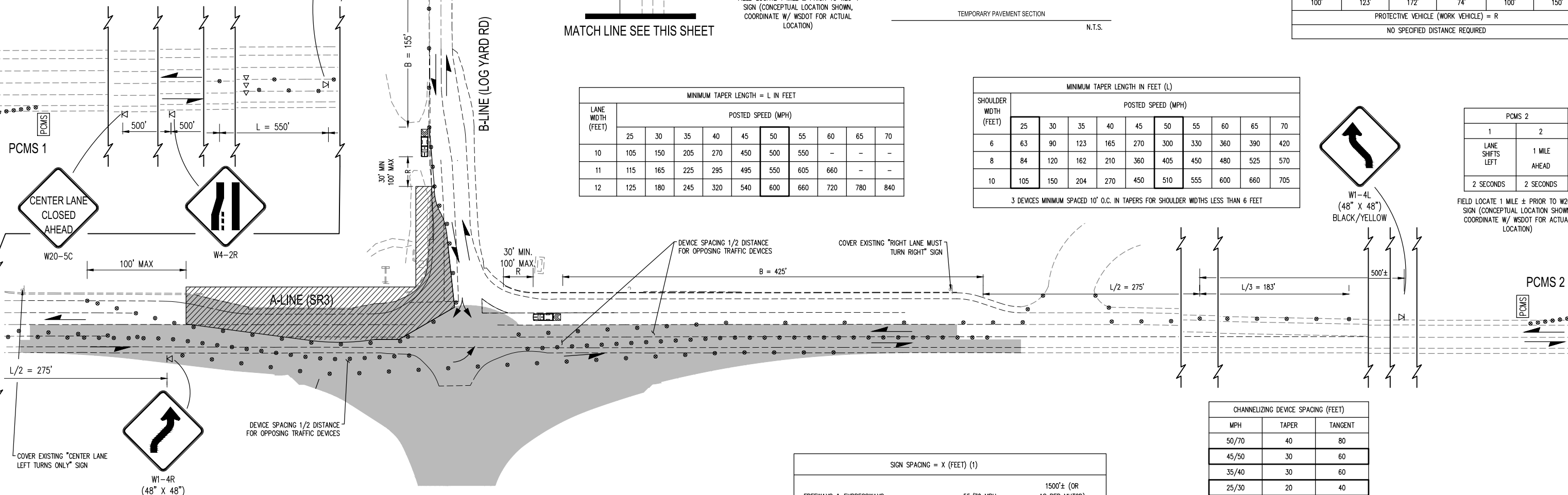
LANE WIDTH (FEET)	MINIMUM TAPER LENGTH = L IN FEET									
	POSTED SPEED (MPH)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

SHOULDER WIDTH (FEET)	MINIMUM TAPER LENGTH IN FEET (L)									
	POSTED SPEED (MPH)									
	25	30	35	40	45	50	55	60	65	70
6	63	90	123	165	270	300	330	360	390	420
8	84	120	162	210	360	405	450	480	525	570
10	105	150	204	270	450	510	555	600	660	705

3 DEVICES MINIMUM SPACED 10' O.C. IN TAPERS FOR SHOULDER WIDTHS LESS THAN 6 FEET

PCMS 2	
1	2
LANE SHIFTS LEFT	1 MILE AHEAD
2 SECONDS	2 SECONDS

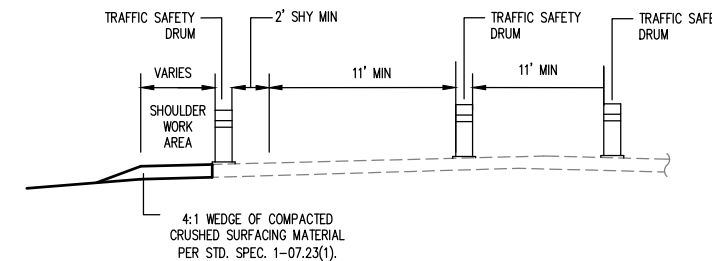
FIELD LOCATE 1 MILE ± PRIOR TO W20-1 SIGN (CONCEPTUAL LOCATION SHOWN, COORDINATE W/ WSDOT FOR ACTUAL LOCATION)



CHANNELIZING DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/70	40	80
45/50	30	60
35/40	30	60
25/30	20	40

SIGN SPACING = X (FEET) (1)		
FREeways & EXPRESSWAYS	55/70 MPH	1500'± (OR AS PER MUTCD)
RURAL HIGHWAYS	60/65 MPH	800'±
RURAL ROADS	45/55 MPH	500'±
RURAL ROADS, URBAN ARTERIAL	35/40 MPH	350'±
RURAL ROADS, URBAN ARTERIAL RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)

- (1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPs, AT-GRADE INTERSECTIONS, AND DRIVEWAYS.
- (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



A-LINE TYPICAL ROADWAY SECTION (NON-WORKING HOURS)
DURING NON-WORKING HOURS THESE SIGNS AND THE SHOULDER CLOSURE TAPERING ARE REQUIRED TO PROTECT THE DROP-OFF.

N.T.S.

1. SEE SHEET TC-01 FOR CLASS A SIGNING.
2. WHEN USED, THE DEVICE SPACING FOR THE DOWNSTREAM TAPER SHOULD BE 20' O.C.
3. ALL CONFLICTING EXISTING SIGNS SHALL BE COVERED, AS DETERMINED BY THE ENGINEER OR WSDOT INSPECTOR.
4. TYPICAL APPLICATION SHOWN. ADJUST SIGNS AND LOCATIONS TO FIT SITE CONDITIONS.
5. EXTEND CHANNELIZING DEVICE TAPERS ACROSS SHOULDER.
6. SEE SPECIAL PROVISIONS: "PUBLIC CONVENIENCE AND SAFETY-CONSTRUCTION UNDER TRAFFIC: FOR WORK HOUR RESTRICTIONS."
7. EXTEND AND/OR REDUCE SHOULDER CLOSURES AND WORK AREAS AS NECESSARY.
8. NO ENCRoACHMENT ON TRAVELED LANE. IF ENCRoACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
9. CALL ULYMPIC RADIUS (253-545-2420) ONE HOUR PRIOR TO ANY LANE RESTRICTIONS.
10. PROTECTIVE VEHICLE WITH TRANSPORTABLE ATTENUATOR REQUIRED - MAY BE A WORK VEHICLE.
11. MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.
12. THIS PLAN SHALL OPERATE WITHOUT THE USE OF FLAGGERS OR SPOTTERS.
13. SIGNS TO BE LEFT IN PLACE FOR 3 DAYS OR LONGER SHALL BE POST MOUNTED.
14. ALL DROP-OFFS AND GRADE CHANGES SHALL BE IN CONFORMANCE WITH STD. SPEC. 1-07.23(1).
15. CONTRACTOR SHALL MAINTAIN SMOOTH COMPACTED DRIVING SURFACE THROUGHOUT CONSTRUCTION. IF TEMPORARY PAVEMENT OR TEMPORARY PAVEMENT REPAIR IS REQUIRED, THE CONTRACTOR SHALL PROVIDE AT CONTRACTOR'S EXPENSE.
16. CONTRACTOR SHALL PROVIDE TEMPORARY A/C PAVEMENT DURING CONSTRUCTION TO FACILITATE TRAFFIC FLOW AND SAFETY. TEMPORARY
17. NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE STD. SPEC 1-10.3(1)4 (TYP).

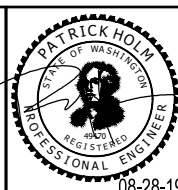
GRADE HMA. ALTERNATE PAVING DEPTH SHALL BE APPROVED BY THE WSDOT INSPECTOR AND PROJECT ENGINEER. SEE SPECIAL PROVISIONS.

LANE SHIFT - THREE LANE ROADWAY

Aug 28, 2019 4:21:01pm - User: kono.melvin
K:\PROJECTS\0328 MASON TRANSIT AUTHORITY\0328.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-TC-04-T.DWG

Δ	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH		

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED



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PROJECT NAME:

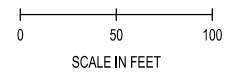
MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION
TRAFFIC CONTROL PLAN

DRAWING No.: TC-04
SHEET No.: 49 OF 52

T. 23 N., R. 01 W., S. 21, W.M.

LEGEND

- CHANNELIZING DEVICES (TRAFFIC SAFETY DRUMS)
- WORK AREA
- CLASS B SIGN LOCATION - TEMPORARY MOUNT
- CLASS A SIGN LOCATION - POST MOUNT
- DIRECTIONAL ARROW
- PROTECTIVE VEHICLE WITH TRANSPORTABLE ATTENUATOR - REQUIRED (MAY BE A WORK VEHICLE)
- PORTABLE CHANGEABLE MESSAGE SIGN
- FLAGGER WITHIN 50'-100'. MINIMUM 6 DEVICES IN FRONT OF FLAGGER



PCMS 1	
1	2
CENTER LANE CLOSED	1 MILE AHEAD
2 SECONDS	2 SECONDS

FIELD LOCATE 1 MILE ± PRIOR TO W20-1 SIGN (CONCEPTUAL LOCATION SHOWN, COORDINATE W/ WSDOT FOR ACTUAL LOCATION)

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
MOST VEHICLE WEIGHT 9,900 TO 22,000 LBS.					MOST VEHICLE WEIGHT > 22,000 LBS.					
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH					
100'	123'	172'	74'	100'	150'					
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										

SIGN SPACING = X (FEET) (1)		
FREWAYS & EXPRESSWAYS	55/70 MPH	1500'± (OR AS PER MUTCD)
RURAL HIGHWAYS	60/65 MPH	800'±
RURAL ROADS	45/55 MPH	500'±
RURAL ROADS, URBAN ARTERIAL	35/40 MPH	350'±
RURAL ROADS, URBAN ARTERIAL RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)

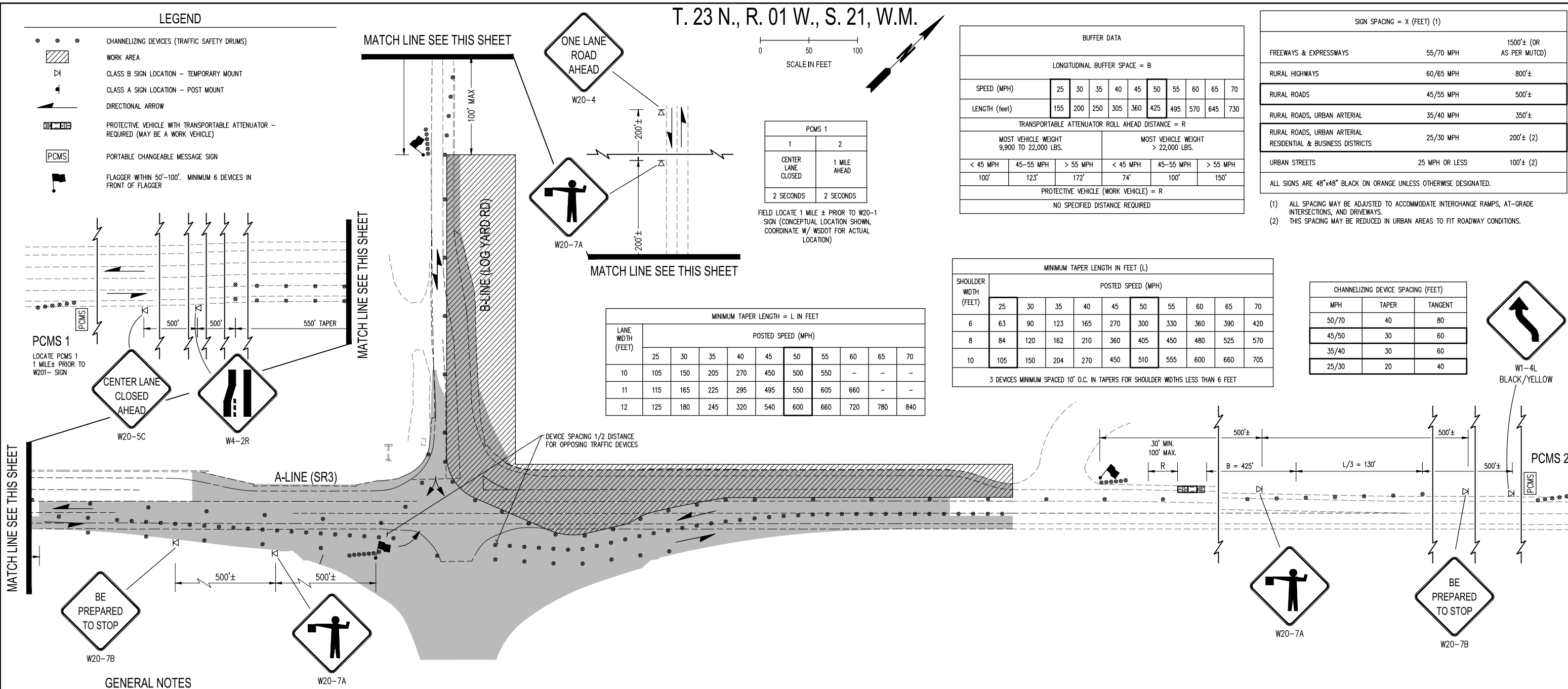
- (1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS, AND DRIVEWAYS.
- (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MINIMUM TAPER LENGTH IN FEET (L)										
SHOULDER WIDTH (FEET)	POSTED SPEED (MPH)									
	25	30	35	40	45	50	55	60	65	70
6	63	90	123	165	270	300	330	360	390	420
8	84	120	162	210	360	405	450	480	525	570
10	105	150	204	270	450	510	555	600	660	705

3 DEVICES MINIMUM SPACED 10' O.C. IN TAPERS FOR SHOULDER WIDTHS LESS THAN 6 FEET

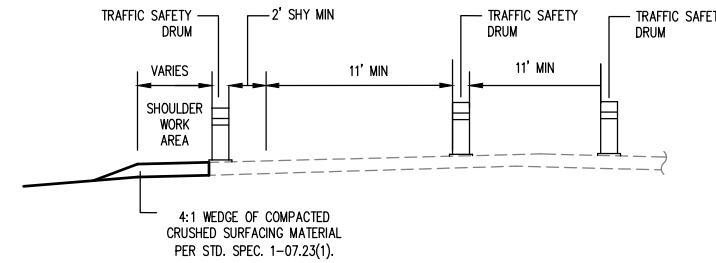
CHANNELIZING DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/70	40	80
45/50	30	60
35/40	30	60
25/30	20	40

MINIMUM TAPER LENGTH = L IN FEET										
LANE WIDTH (FEET)	POSTED SPEED (MPH)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840



GENERAL NOTES

1. SEE SHEET TC-01 FOR CLASS A SIGNING.
2. WHEN USED, THE DEVICE SPACING FOR THE DOWNSTREAM TAPER SHOULD BE 20' O.C.
3. ALL CONFLICTING EXISTING SIGNS SHALL BE COVERED, AS DETERMINED BY THE ENGINEER OR WSDOT INSPECTOR.
4. TYPICAL APPLICATION SHOWN. ADJUST SIGNS AND LOCATIONS TO FIT SITE CONDITIONS.
5. EXTEND CHANNELIZING DEVICE TAPERS ACROSS SHOULDER.
6. SEE SPECIAL PROVISIONS: "PUBLIC CONVENIENCE AND SAFETY-CONSTRUCTION UNDER TRAFFIC: FOR WORK HOUR RESTRICTIONS."
7. EXTEND AND/OR REDUCE SHOULDER CLOSURES AND WORK AREAS AS NECESSARY.
8. NO ENCROACHMENT ON TRAVELED LANE. IF ENCROACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
9. CALL ULYMPIC RADIUS (253-545-2420) ONE HOUR PRIOR TO ANY LANE RESTRICTIONS.
10. PROTECTIVE VEHICLE WITH TRANSPORTABLE ATTENUATOR REQUIRED - MAY BE A WORK VEHICLE.
11. MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.
12. SIGNS TO BE LEFT IN PLACE FOR 3 DAYS OR LONGER SHALL BE POST MOUNTED.
13. ALL DROP-OFFS AND GRADE CHANGES SHALL BE IN CONFORMANCE WITH STD. SPEC. 1-07.23(1).
14. CONTRACTOR SHALL MAINTAIN SMOOTH COMPACTED DRIVING SURFACE THROUGHOUT CONSTRUCTION. IF TEMPORARY PAVEMENT OR TEMPORARY PAVEMENT REPAIR IS REQUIRED, THE CONTRACTOR SHALL PROVIDE AT CONTRACTOR'S EXPENSE.
15. CONTRACTOR SHALL PROVIDE TEMPORARY A/C PAVEMENT DURING CONSTRUCTION TO FACILITATE TRAFFIC FLOW AND SAFETY. TEMPORARY PAVEMENT SHALL BE A MINIMUM OF 1" THICK (COMPACTED) COMMERCIAL GRADE HMA. ALTERNATE PAVING DEPTH SHALL BE APPROVED BY THE WSDOT INSPECTOR AND PROJECT ENGINEER. SEE SPECIAL PROVISIONS.



A-LINE TYPICAL ROADWAY SECTION (NON-WORKING HOURS) NTS
DURING NON-WORKING HOURS THESE SIGNS AND THE SHOULDER CLOSURE TAPERING ARE REQUIRED TO PROTECT THE DROP-OFF.

PCMS 2	
1	2
LANE SHIFTS LEFT	1 MILE AHEAD
2 SECONDS	2 SECONDS

FIELD LOCATE 1 MILE ± PRIOR TO W20-1 SIGN (CONCEPTUAL LOCATION SHOWN, COORDINATE W/ WSDOT FOR ACTUAL LOCATION)

LANE SHIFT

Aug 28, 2019 4:21:32pm - User: keno.melvin
K:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238-05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738-05-TC-05-T.DWG

REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1 FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2 FPS #2	07/29/19	PH		
3 FPS #3	08/28/19	PH		

DRAWN BY:	JOB No.:
M. JOHNSON	0738.05
CHECKED BY:	DRAWING FILE No.:
P. HOLM	0738.05-TC-05-T

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED



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MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

TRAFFIC CONTROL PLAN

DRAWING No.: TC-05
SHEET No.: 50 OF 52

LEGEND

- CHANNELIZING DEVICES (TRAFFIC SAFETY DRUMS)
- WORK AREA
- CLASS B SIGN LOCATION - TEMPORARY MOUNT
- CLASS A SIGN LOCATION - POST MOUNT
- DIRECTIONAL ARROW
- PORTABLE CHANGEABLE MESSAGE SIGN

CHANNELIZING DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/70	40	80
45/50	30	60
35/40	30	60
25/30	20	40

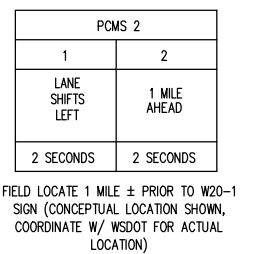
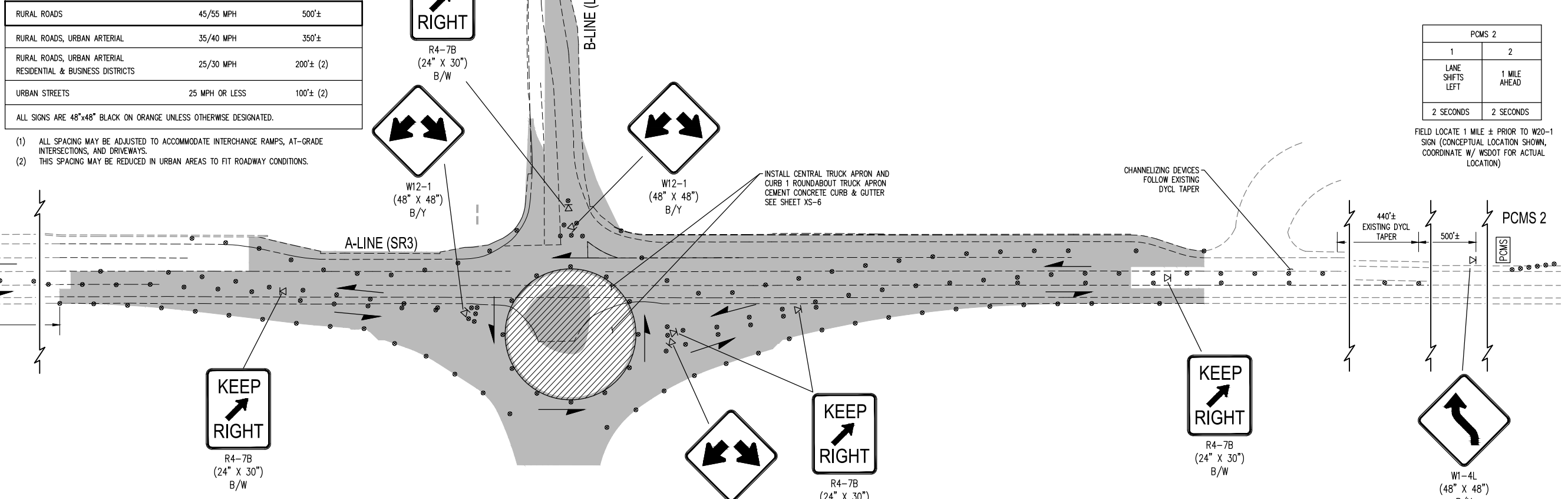
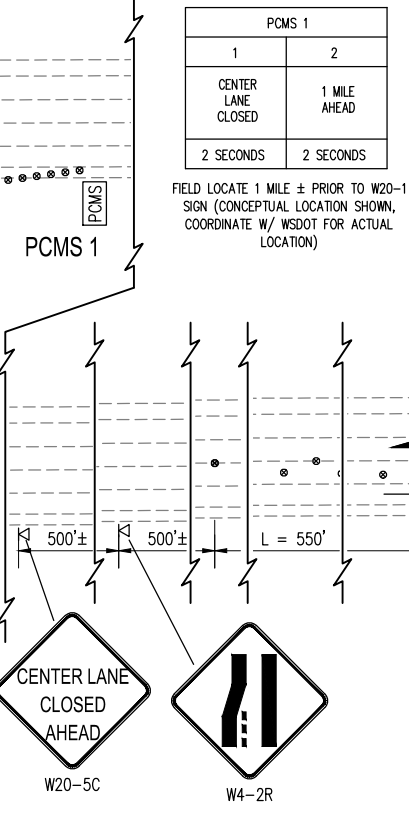
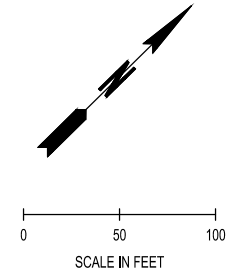
SIGN SPACING = X (FEET) (1)		
FREWAYS & EXPRESSWAYS	55/70 MPH	1500'± (OR AS PER MUTCD)
RURAL HIGHWAYS	60/65 MPH	800'±
RURAL ROADS	45/55 MPH	500'±
RURAL ROADS, URBAN ARTERIAL	35/40 MPH	350'±
RURAL ROADS, URBAN ARTERIAL RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)

ALL SIGNS ARE 48"x48" BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.

- (1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS, AND DRIVEWAYS.
- (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

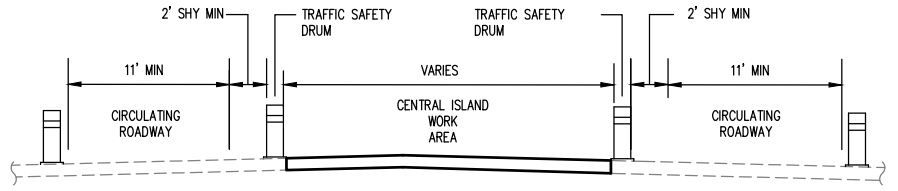
LANE WIDTH (FEET)	MINIMUM TAPER LENGTH = L IN FEET									
	POSTED SPEED (MPH)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
MOST VEHICLE WEIGHT 9,900 TO 22,000 LBS.					MOST VEHICLE WEIGHT > 22,000 LBS.					
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH					
100'	123'	172'	74'	100'	150'					
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										



GENERAL NOTES

1. SEE SHEET TC-01 FOR CLASS A SIGNING.
2. WHEN USED, THE DEVICE SPACING FOR THE DOWNSTREAM TAPER SHOULD BE 20' O.C.
3. ALL CONFLICTING EXISTING SIGNS SHALL BE COVERED, AS DETERMINED BY THE ENGINEER OR WSDOT INSPECTOR.
4. TYPICAL APPLICATION SHOWN. ADJUST SIGNS AND LOCATIONS TO FIT SITE CONDITIONS.
5. EXTEND CHANNELIZING DEVICE TAPERS ACROSS SHOULDER.
6. SEE SPECIAL PROVISIONS: "PUBLIC CONVENIENCE AND SAFETY-CONSTRUCTION UNDER TRAFFIC" FOR WORK HOUR RESTRICTIONS.
7. EXTEND AND/OR REDUCE SHOULDER CLOSURES AND WORK AREAS AS NECESSARY.
8. NO ENCRoACHMENT ON TRAVELED LANE. IF ENCRoACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
9. CALL OLYMPIC RADIO (253-548-2420) ONE HOUR PRIOR TO ANY LANE RESTRICTIONS.
10. PROTECTIVE VEHICLE WITH TRANSPORTABLE ATTENUATOR REQUIRED - MAY BE A WORK VEHICLE.
11. MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.
12. THIS PLAN SHALL OPERATE WITHOUT THE USE OF FLAGGERS OR SPOTTERS.
13. SIGNS TO BE LEFT IN PLACE FOR 3 DAYS OR LONGER SHALL BE POST MOUNTED.
14. ALL DROP-OFFS AND GRADE CHANGES SHALL BE IN CONFORMANCE WITH STD. SPEC. 1-07.23(1).
15. CONTRACTOR SHALL MAINTAIN SMOOTH COMPACTED DRIVING SURFACE THROUGHOUT CONSTRUCTION. IF TEMPORARY PAVEMENT OR TEMPORARY PAVEMENT REPAIR IS REQUIRED, THE CONTRACTOR SHALL PROVIDE AT CONTRACTOR'S EXPENSE.
16. CONTRACTOR SHALL PROVIDE TEMPORARY A/C PAVEMENT DURING CONSTRUCTION TO FACILITATE TRAFFIC FLOW AND SAFETY. TEMPORARY



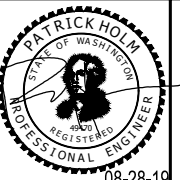
A-LINE TYPICAL ROADWAY SECTION (NON-WORKING HOURS)
DURING NON-WORKING HOURS THESE SIGNS AND THE SHOULDER CLOSURE TAPERING ARE REQUIRED TO PROTECT THE DROP-OFF.

CENTRAL ISLAND INSTALLATION

Aug 28, 2019 4:22:01pm - User: kemo.melvin
K:\PROJECTS\0238 MASON TRANSIT AUTHORITY\0238.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-TC-06-T.DWG

Δ	REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		
3	FPS #3	08/28/19	PH		

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED



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PROJECT NAME:

MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

TRAFFIC CONTROL PLAN

DRAWING No.: TC-06
SHEET No.: 51 OF 52

LEGEND

- CHANNELIZING DEVICES (TRAFFIC SAFETY DRUMS)
- WORK AREA
- CLASS B SIGN LOCATION - TEMPORARY MOUNT
- CLASS A SIGN LOCATION - POST MOUNT
- DIRECTIONAL ARROW
- PORTABLE CHANGEABLE MESSAGE SIGN
- FLAGGER WITHIN 50'-100'
MINIMUM 6 DEVICES IN FRONT OF FLAGGER

MINIMUM TAPER LENGTH = L IN FEET

LANE WIDTH (FEET)	POSTED SPEED (MPH)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

CHANNELIZING DEVICE SPACING (FEET)

MPH	TAPER	TANGENT
50/70	40	80
45/50	30	60
35/40	30	60
25/30	20	40

T. 23 N., R. 01 W., S. 21, W.M.

SIGN SPACING = X (FEET) (1)

ROAD TYPE	SPEED	SPACING
FREWAYS & EXPRESSWAYS	55/70 MPH	1500'± (OR AS PER MUTCD)
RURAL HIGHWAYS	60/65 MPH	800'±
RURAL ROADS	45/55 MPH	500'±
RURAL ROADS, URBAN ARTERIAL	35/40 MPH	350'±
RURAL ROADS, URBAN ARTERIAL RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)

ALL SIGNS ARE 48"x48" BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.

- (1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS, AND DRIVEWAYS.
- (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

BUFFER DATA

LONGITUDINAL BUFFER SPACE = B

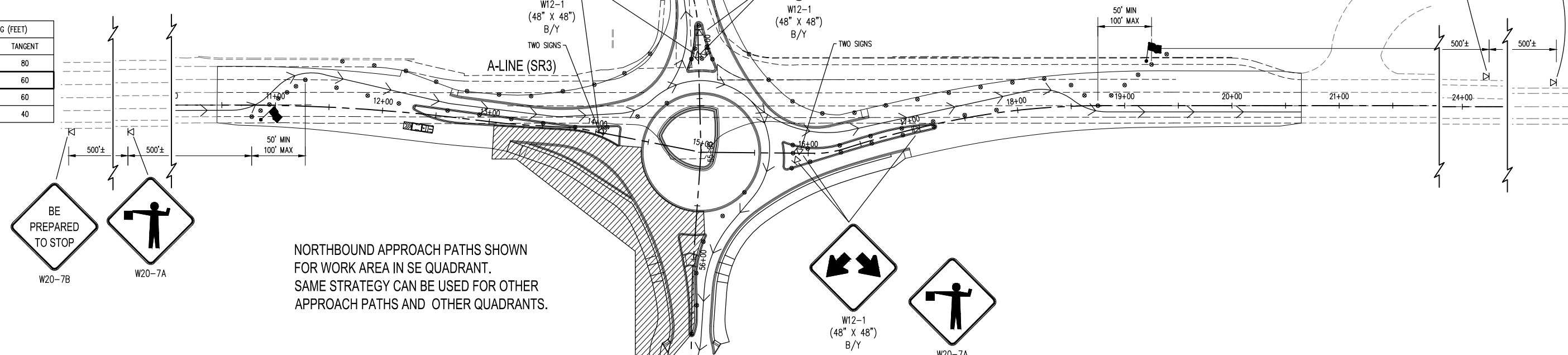
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R

MOST VEHICLE WEIGHT	< 45 MPH			> 45 MPH		
9,900 TO 22,000 LBS.	100'	123'	172'	100'	123'	172'
MOST VEHICLE WEIGHT > 22,000 LBS.	74'			150'		

PROTECTIVE VEHICLE (WORK VEHICLE) = R

NO SPECIFIED DISTANCE REQUIRED



NORTHBOUND APPROACH PATHS SHOWN FOR WORK AREA IN SE QUADRANT. SAME STRATEGY CAN BE USED FOR OTHER APPROACH PATHS AND OTHER QUADRANTS.

GENERAL NOTES

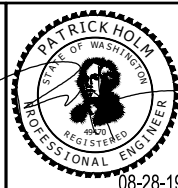
1. SEE SHEET TC-01 FOR CLASS A SIGNING.
2. WHEN USED, THE DEVICE SPACING FOR THE DOWNSTREAM TAPER SHOULD BE 20' O.C.
3. ALL CONFLICTING EXISTING SIGNS SHALL BE COVERED, AS DETERMINED BY THE ENGINEER OR WSDOT INSPECTOR.
4. TYPICAL APPLICATION SHOWN. ADJUST SIGNS AND LOCATIONS TO FIT SITE CONDITIONS.
5. EXTEND CHANNELIZING DEVICE TAPERS ACROSS SHOULDER.
6. SEE SPECIAL PROVISIONS: "PUBLIC CONVENIENCE AND SAFETY-CONSTRUCTION UNDER TRAFFIC: FOR WORK HOUR RESTRICTIONS."
7. EXTEND AND/OR REDUCE SHOULDER CLOSURES AND WORK AREAS AS NECESSARY.
8. NO ENCROACHMENT ON TRAVELED LANE. IF ENCROACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
9. CALL OLYMPIC RADIO (253-548-2420) ONE HOUR PRIOR TO ANY LANE RESTRICTIONS.
10. MAY BE A WORK VEHICLE.
11. MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.
12. SIGNS TO BE LEFT IN PLACE FOR 3 DAYS OR LONGER SHALL BE POST MOUNTED.
13. ALL DROP-OFFS AND GRADE CHANGES SHALL BE IN CONFORMANCE WITH STD. SPEC. 1-07.23(1).
14. CONTRACTOR SHALL MAINTAIN SMOOTH COMPACTED DRIVING SURFACE THROUGHOUT CONSTRUCTION. IF TEMPORARY PAVEMENT OR TEMPORARY PAVEMENT REPAIR IS REQUIRED, THE CONTRACTOR SHALL PROVIDE AT CONTRACTOR'S EXPENSE.
15. CONTRACTOR SHALL PROVIDE TEMPORARY A/C PAVEMENT DURING CONSTRUCTION TO FACILITATE TRAFFIC FLOW AND SAFETY. TEMPORARY PAVEMENT SHALL BE A MINIMUM OF 1" THICK (COMPACTED) COMMERCIAL GRADE HMA. ALTERNATE PAVING DEPTH SHALL BE APPROVED BY THE WSDOT INSPECTOR AND PROJECT ENGINEER. SEE SPECIAL PROVISIONS.

ROUNDABOUT FLAGGING CONTROL OPERATION

Aug 28, 2019 4:22:30pm - User: kenomelvin
K:\PROJECTS\0328 MASON TRANSIT AUTHORITY\0328.05 MTA PARK AND RIDE DEVELOPMENT\CADD\BELFAIR\0738.05-TC-07-DMG

REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
1 FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2 FPS #2	07/29/19	PH	M. JOHNSON	JOB No.: 0738.05
3 FPS #3	08/28/19	PH	P. HOLM	DRAWING FILE No.: 0738.05-TC-07-T

ALL DIMENSIONS SHOWN IN FEET UNLESS OTHERWISE DESIGNATED



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8730 TALLON LANE NE, SUITE 200, LACEY, WASHINGTON 98516
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PROJECT NAME:

MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

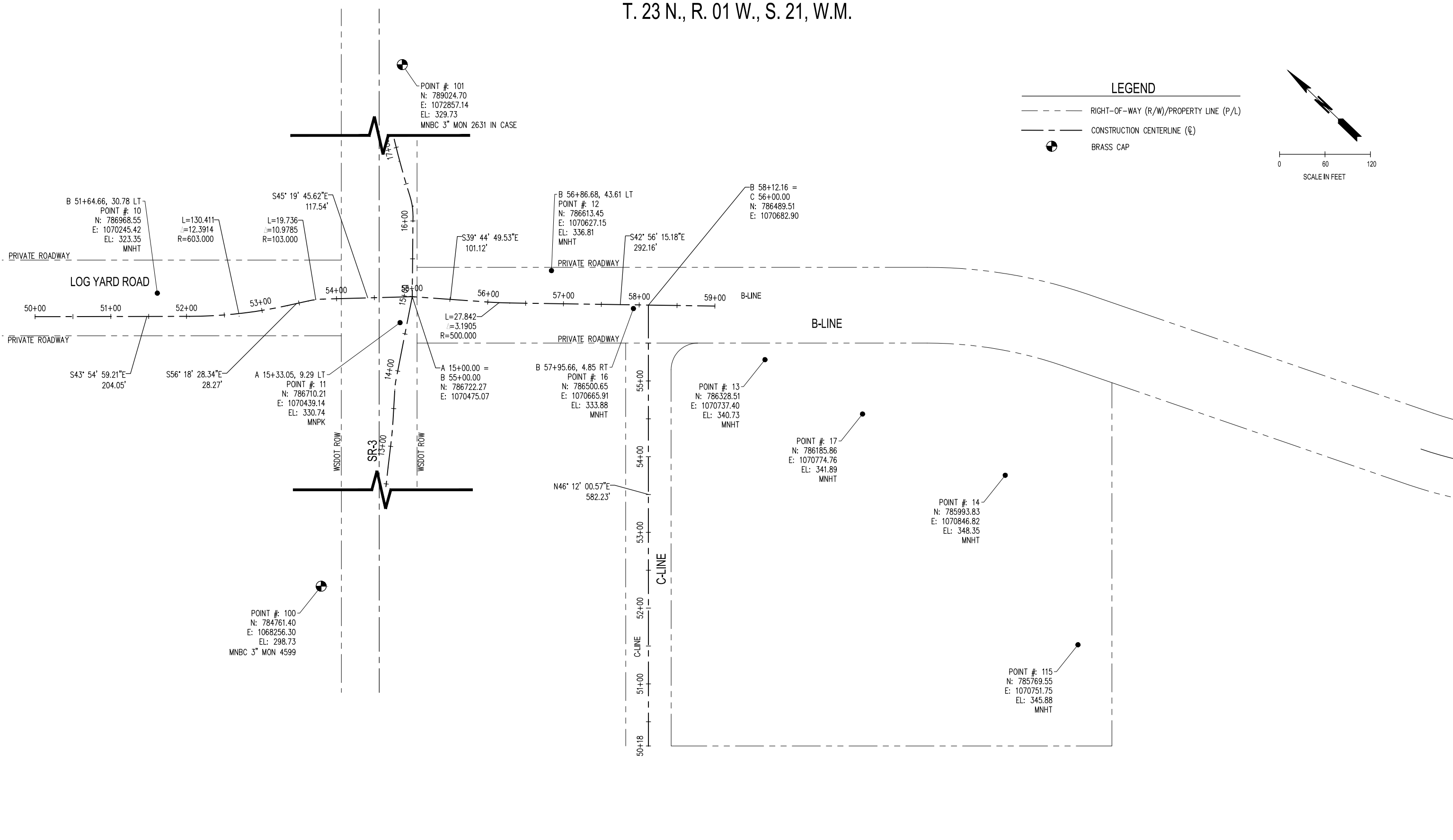
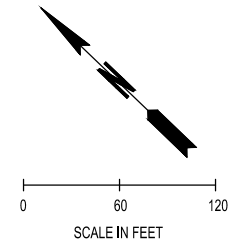
TRAFFIC CONTROL PLAN

DRAWING No.: TC-07
SHEET No.: 52 OF 52

T. 23 N., R. 01 W., S. 21, W.M.

LEGEND

- RIGHT-OF-WAY (R/W)/PROPERTY LINE (P/L)
- CONSTRUCTION CENTERLINE (C)
- ⊕ BRASS CAP



Aug 01, 2019 4:08:44pm - User: nck.mayfield
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Δ	REVISIONS	DATE	BY

DESIGNED BY: N. MAYFIELD	ISSUE DATE: 10-31-2018
DRAWN BY: N. MAYFIELD	JOB No.: 0738.05
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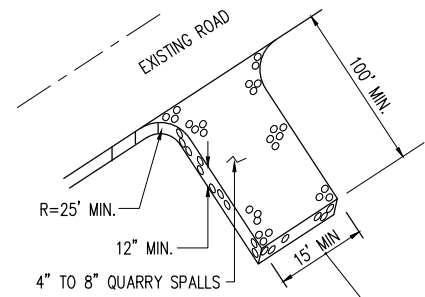
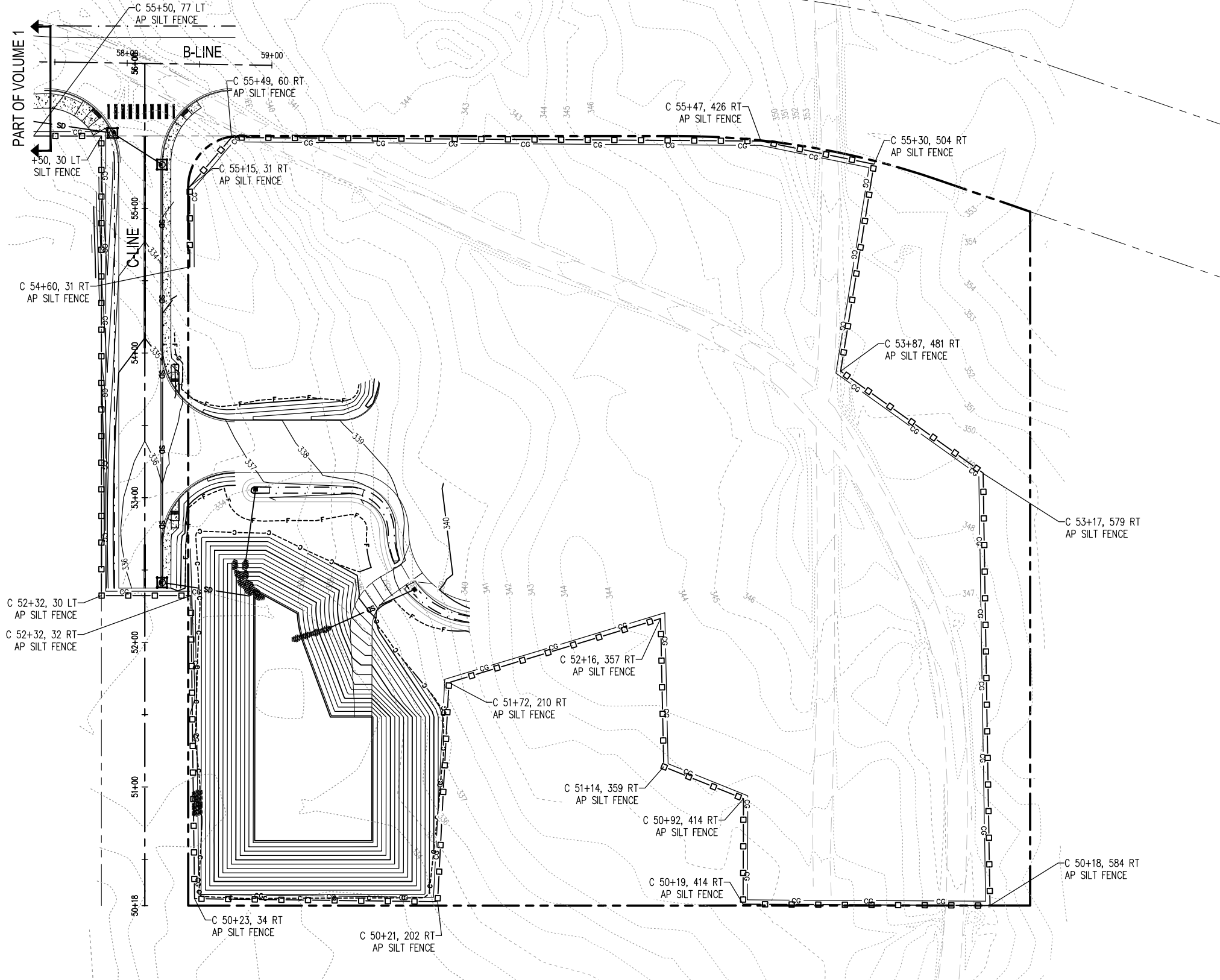
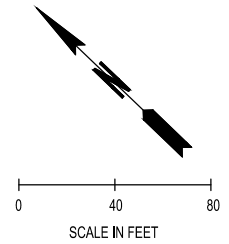
MASON TRANSIT AUTHORITY
BELFAIR
PARK AND RIDE DEVELOPMENT
HORIZONTAL ALIGNMENT

DRAWING No.: AL-1
SHEET No.: 1 of 11

T. 23 N., R. 01 W., S. 21, W.M.

LEGEND

- XX--- EXISTING MAJOR CONTOUR
- XX--- EXISTING MINOR CONTOUR
- XX--- PROPOSED MAJOR CONTOUR
- XX--- PROPOSED MINOR CONTOUR
- --- PROPERTY LINE
- SILT FENCE
(SEE DETAIL ON SHEET EC-2)
- C--- CUT LINE
- F--- FILL LINE
- CG--- CLEARING AND GRUBBING LINE
- SD--- SCHEDULE A STORM SEWER PIPE
12 IN. DIAM.
- STORM DRAIN INLET PROTECTION
(SEE DETAIL ON SHEET EC-2)
- STORM DRAIN INLET PROTECTION AT CULVERT END
(SEE DETAIL ON SHEET EC-2)
- 5'x6'x1' DEEP HAND PLACED QUARRY SPALLS



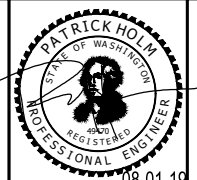
NOTE:
INSTALL CONSTRUCTION ENTRANCE
AT LOCATION WHERE ACCESS OFF
OF A PAVED ROADWAY BEGINS.
PROVIDE FULL WIDTH OF
INGRESS/EGRESS AREA

CONSTRUCTION ENTRANCE
NTS

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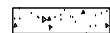
PROJECT NAME:

MASON TRANSIT AUTHORITY
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REMOVAL AND TESG PLAN

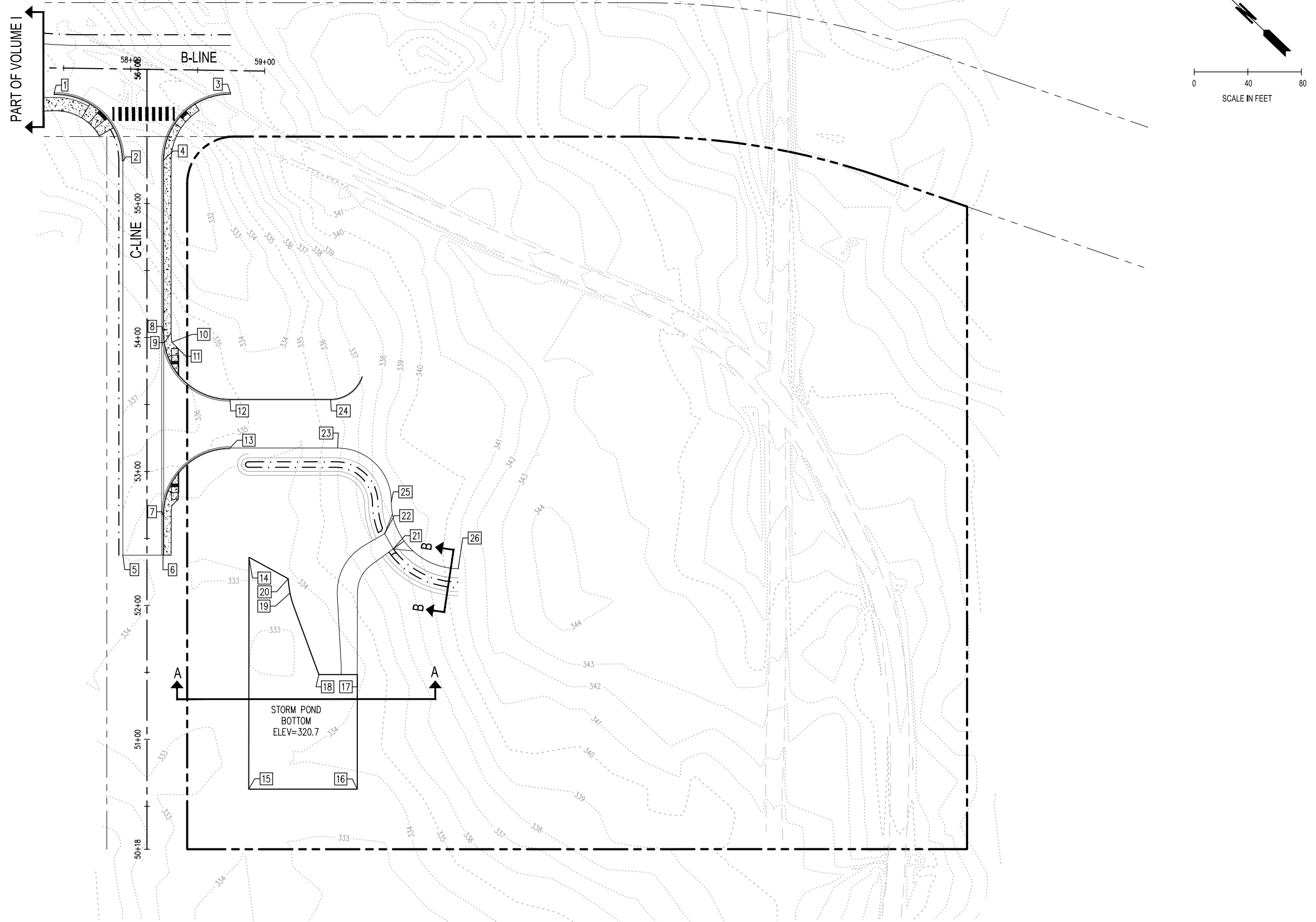
DRAWING No.:
EC-1
SHEET No.:
2 of 11

T. 23 N., R. 01 W., S. 21, W.M.

LEGEND

-  PROPERTY LINE
-  CEMENT CONCRETE TYPE C-1 CURB
(SEE DETAIL ON SHEET SP-2)
-  CEMENT CONCRETE TRAFFIC CURB AND GUTTER
(SEE DETAIL ON SHEET SP-2)
-  CONCRETE SIDEWALK
(SEE DETAIL ON SHEET XS-1)

Point Table		
Point #	Northing	Easting
1	786526.89	1070621.56
2	786455.17	1070621.09
3	786431.79	1070713.02
4	786433.63	1070641.98
5	786251.42	1070408.63
6	786229.77	1070429.40
7	786250.53	1070451.05
8	786344.67	1070549.21
9	786340.34	1070553.36
10	786335.11	1070548.71
11	786328.46	1070548.57
12	786273.97	1070547.73
13	786249.05	1070521.75
14	786182.31	1070472.51
15	786062.77	1070347.60
16	786004.34	1070403.64
17	786063.50	1070465.35
18	786084.18	1070445.52
19	786141.88	1070474.59
20	786150.20	1070481.39
21	786109.07	1070551.67
22	786121.59	1070555.45
23	786191.12	1070577.31
24	786219.81	1070599.67
25	786134.54	1070576.11
26	786063.92	1070574.63




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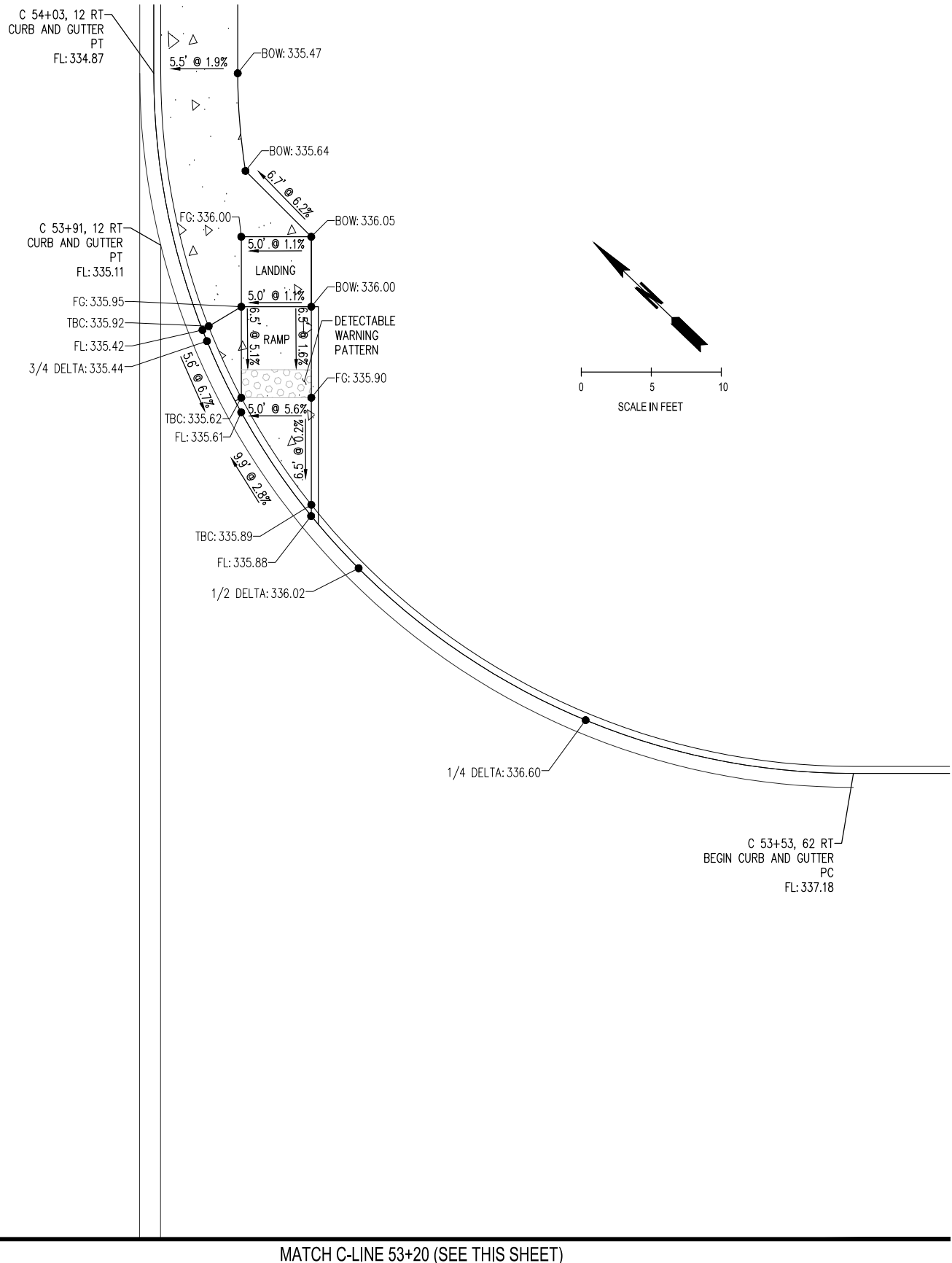
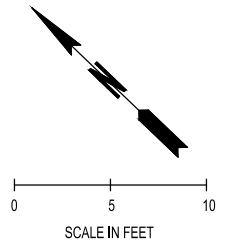
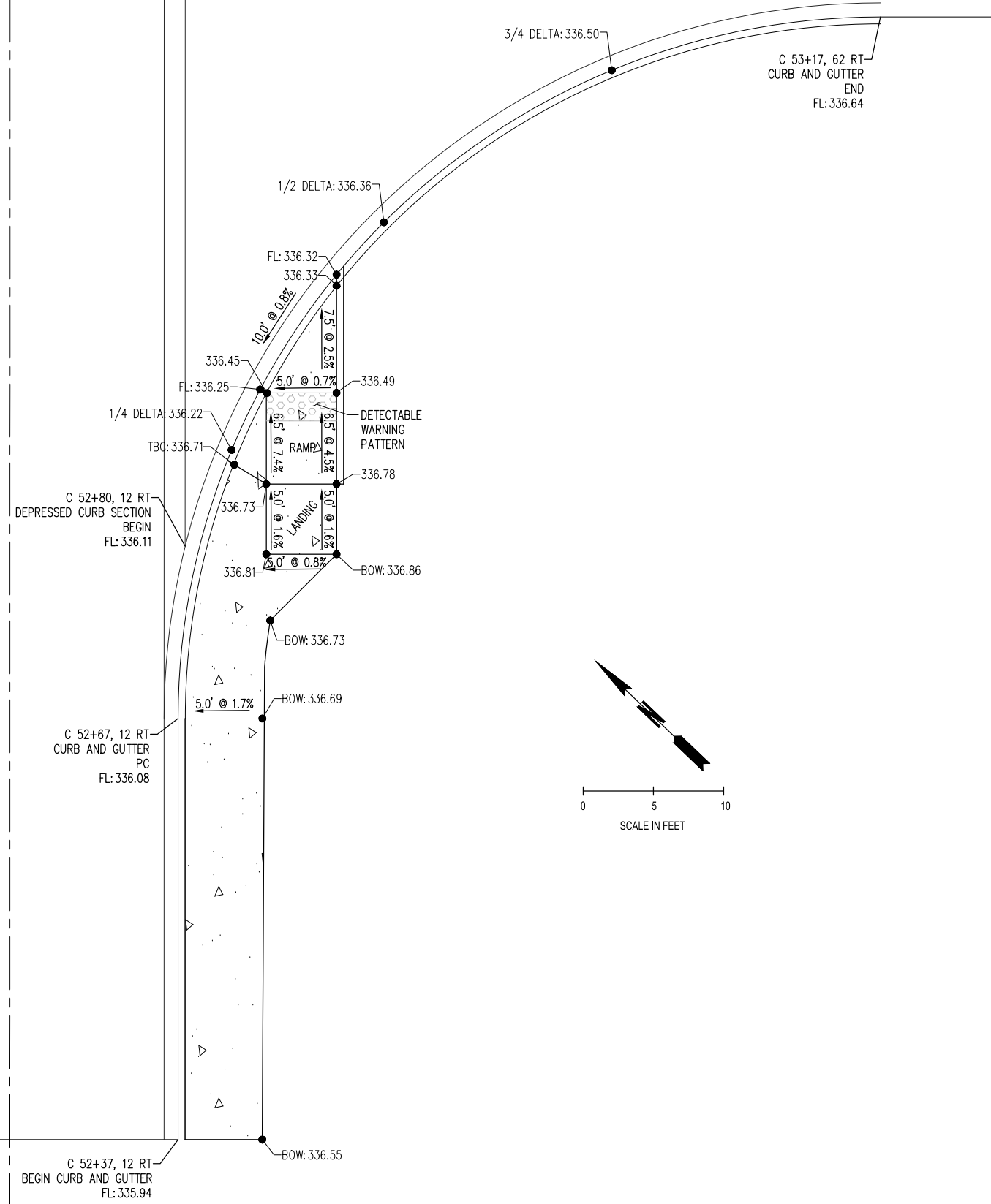
SITE PLAN

DRAWING No.:
SP-1

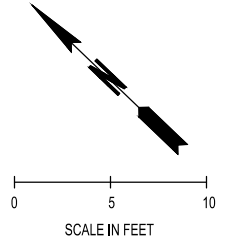
SHEET No.:
3 of 11

MATCH C-LINE 53+20 (SEE THIS SHEET)

C-LINE



C-LINE



MATCH C-LINE 53+20 (SEE THIS SHEET)

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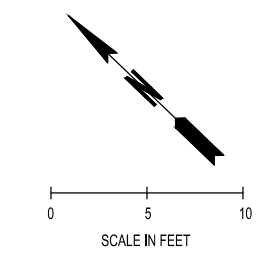
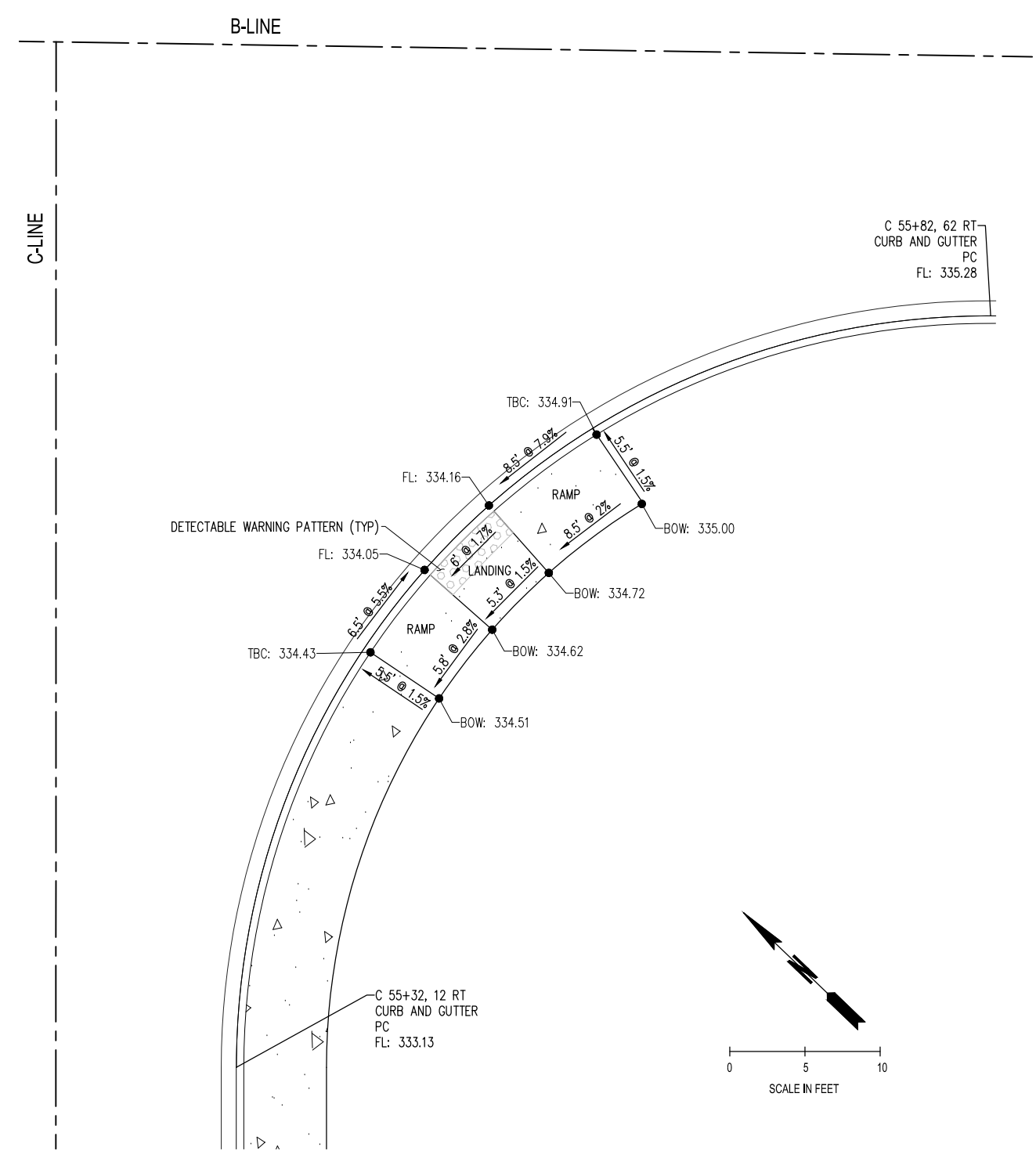
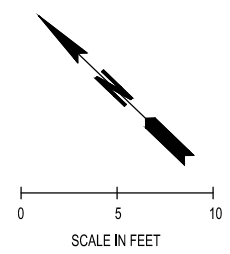
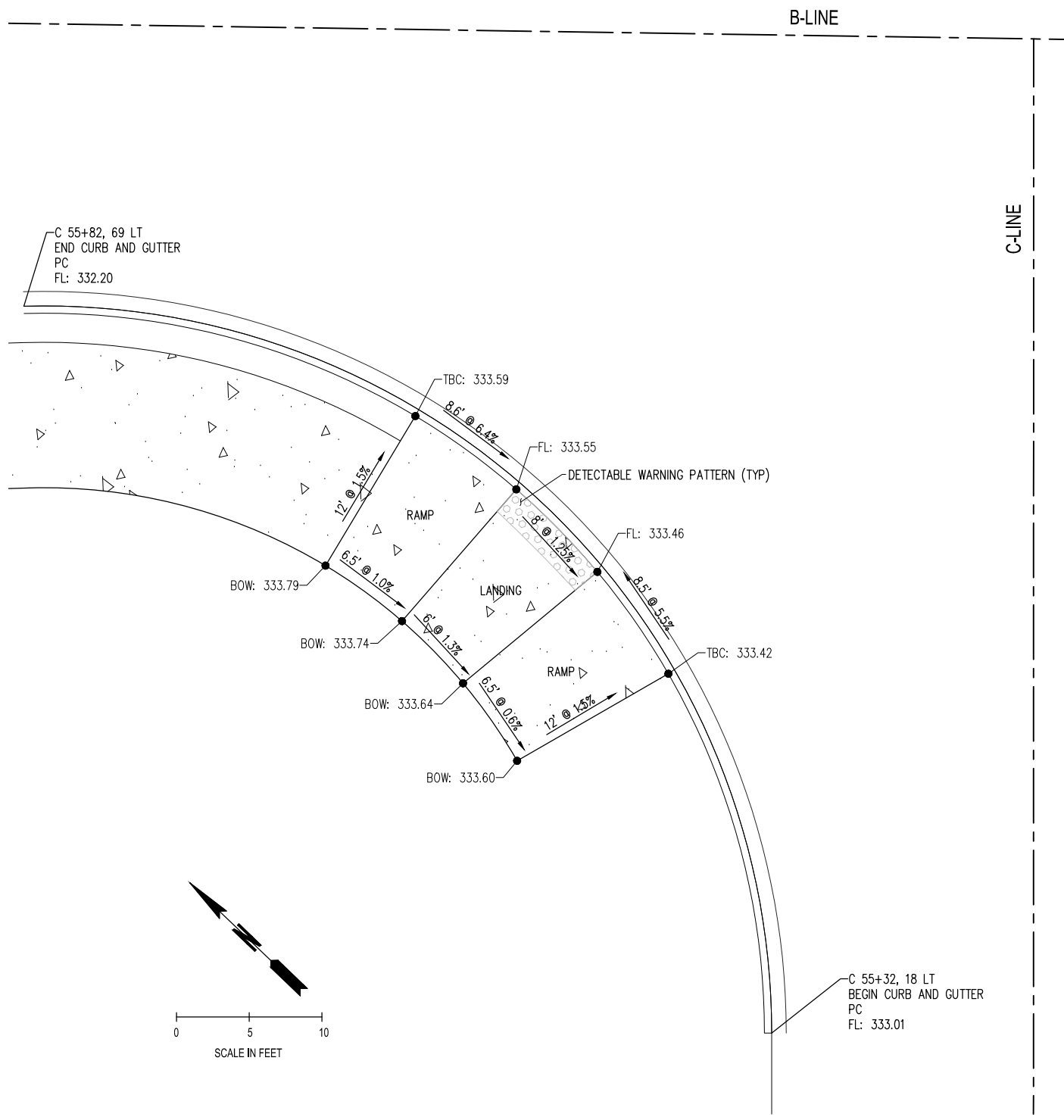


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PARK AND RIDE DEVELOPMENT
RAMP GRADING DETAILS

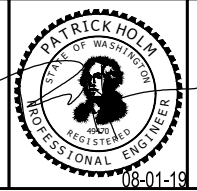
DRAWING No.: SP-5
SHEET No.: 4 of 11



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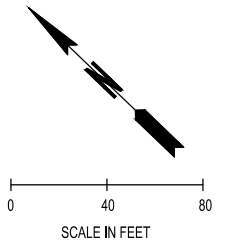
PROJECT NAME:

MASON TRANSIT AUTHORITY
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PARK AND RIDE DEVELOPMENT

RAMP GRADING DETAILS

DRAWING No.: SP-6
SHEET No.: 5 of 11

T. 23 N., R. 01 W., S. 21, W.M.

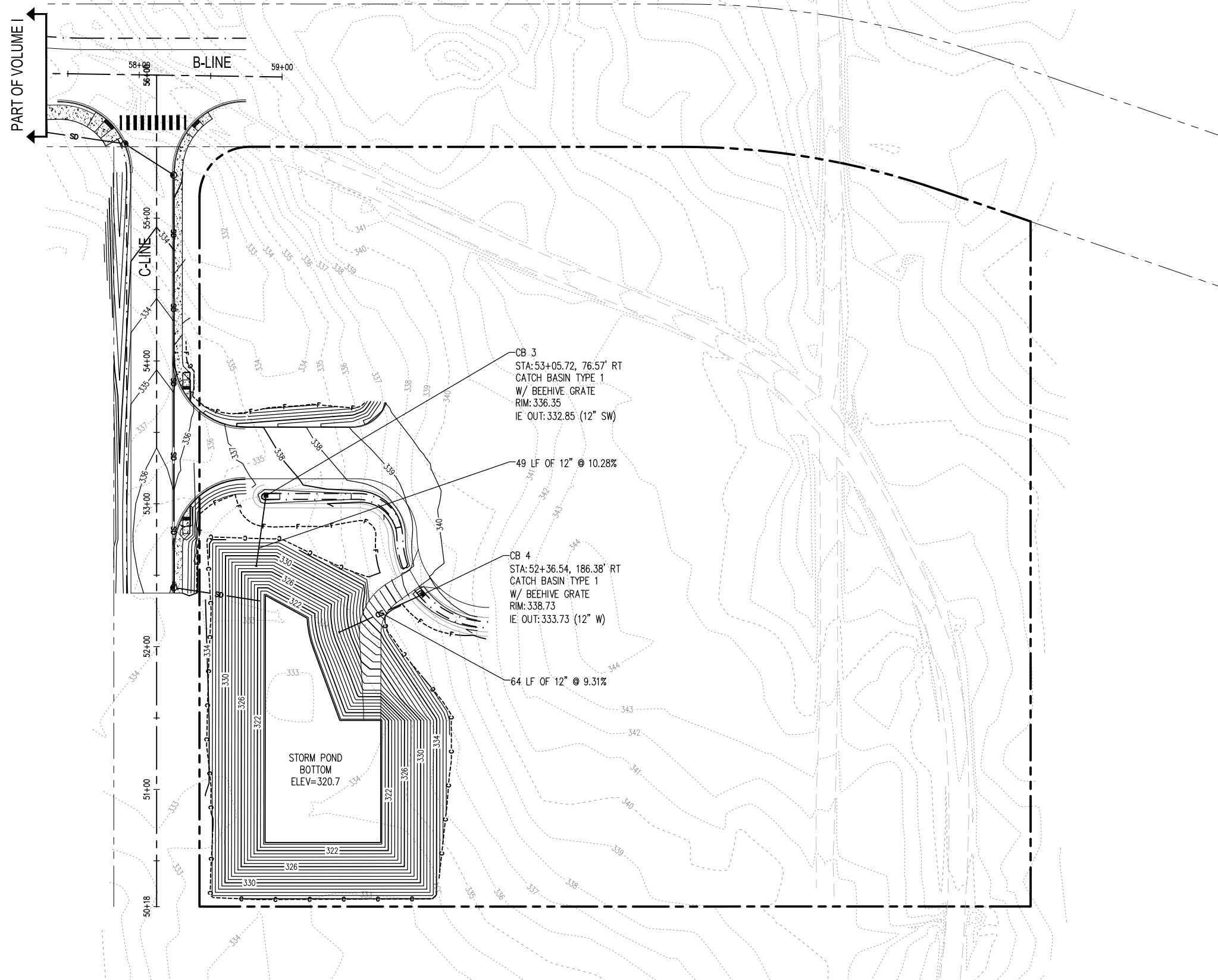


LEGEND

- XX--- EXISTING MAJOR CONTOUR
- XX--- EXISTING MINOR CONTOUR
- XX--- PROPOSED MAJOR CONTOUR
- XX--- PROPOSED MINOR CONTOUR
- --- GRADE BREAK
- - - - - DITCH
- xxx.xx SPOT ELEVATION
- 0.00% SLOPE LABEL
- SD STORM LINE (HDPE)
- CATCH BASIN TYPE 1 W/ BEEHIVE GRATE

GRADING NOTES:

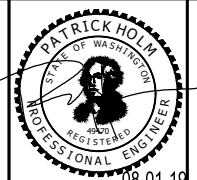
1. SEE "SD" SHEETS FOR STORM WATER INLET, PIPE AND DETENTION SYSTEM DETAILS.
2. EXISTING CONTOURS ARE BASED ON SEPTEMBER 2017 TOPOGRAPHIC SURVEY BY MTN2COAST, LLC
3. SPOT ELEVATIONS REPRESENT FINISHED GRADE AT FLOW LINE UNLESS OTHERWISE NOTED.
4. ALL LANDSCAPE AREAS SHALL BE STABILIZED.



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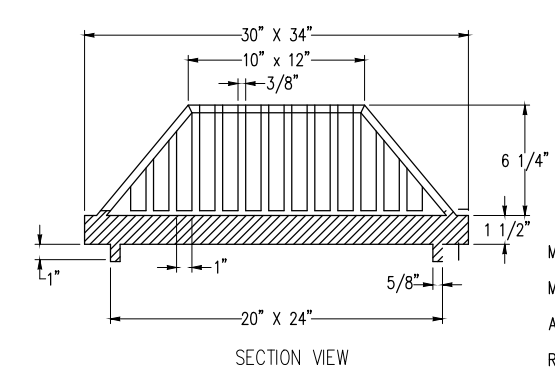
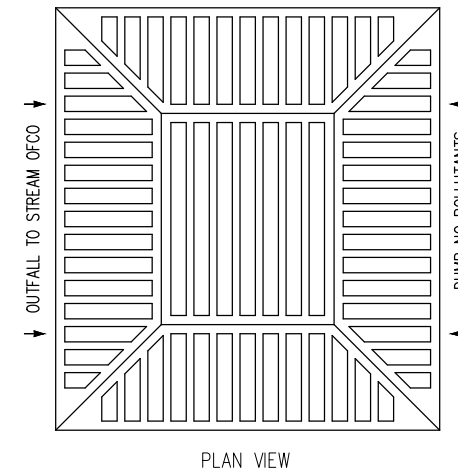
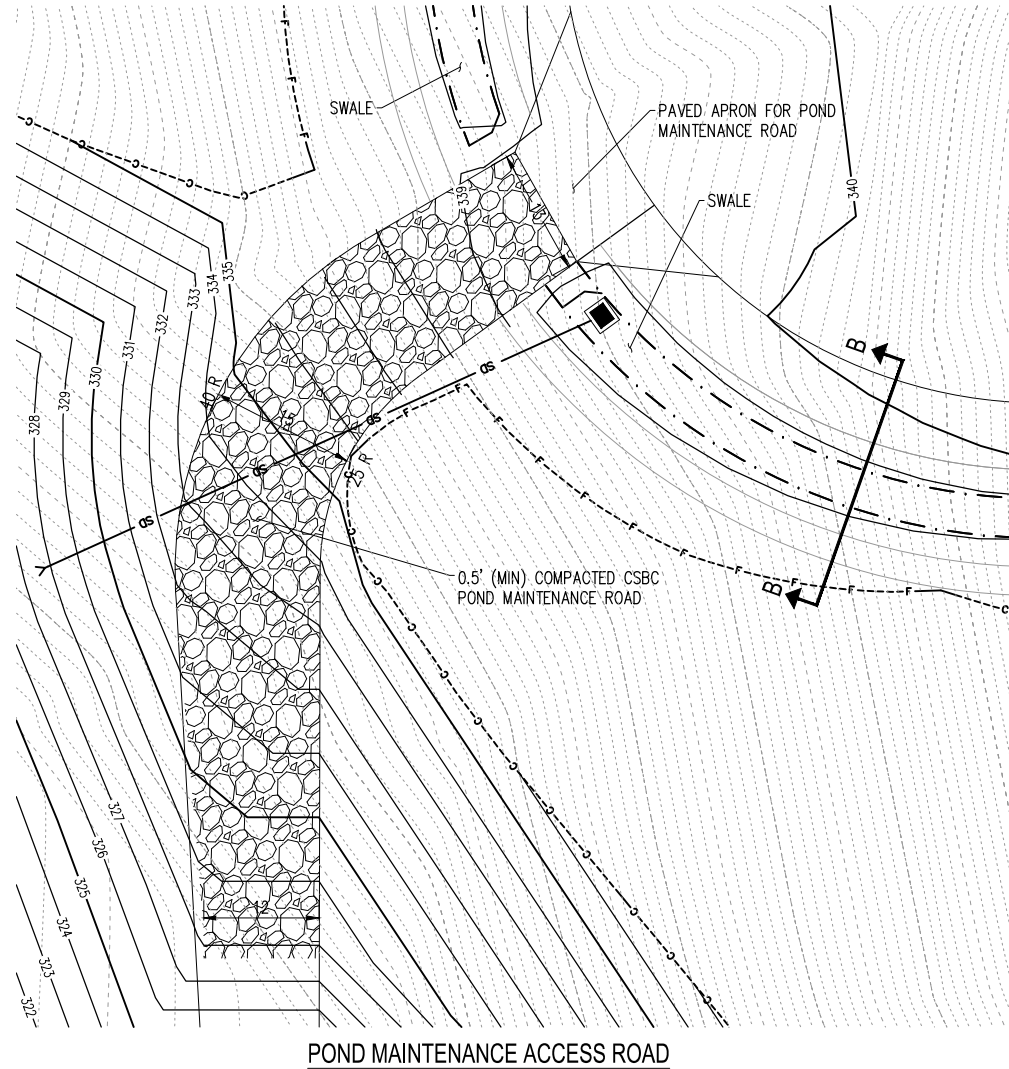
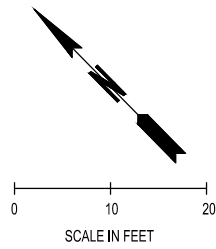


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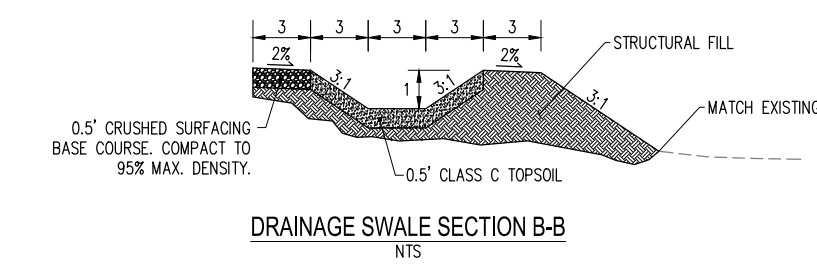
MASON TRANSIT AUTHORITY
BELFAIR
PARK AND RIDE DEVELOPMENT
GRADING AND DRAINAGE PLAN

DRAWING No.: SD-1
SHEET No.: 6 of 11



SPECIFICATIONS
 MANUFACTURER: OLYMPIC FOUNDRY INC.
 MATERIAL: DUCTILE IRON ASTM A536, CL 80-55-06
 APPROXIMATE WEIGHT: 100 LBS.
 RATING: H-20
 PART NO. SM60BH

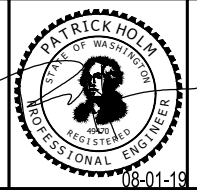
BEEHIVE GRATE FOR USE WITH SM60 30"X34" REV FRAME
 NTS



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 PARK AND RIDE DEVELOPMENT

DRAINAGE DETAILS

DRAWING No.: SD-3
 SHEET No.: 7 of 11

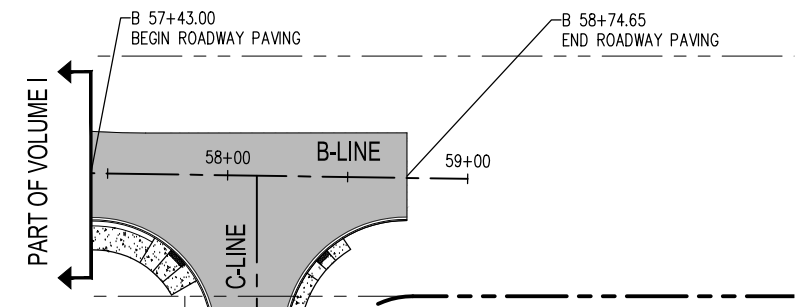
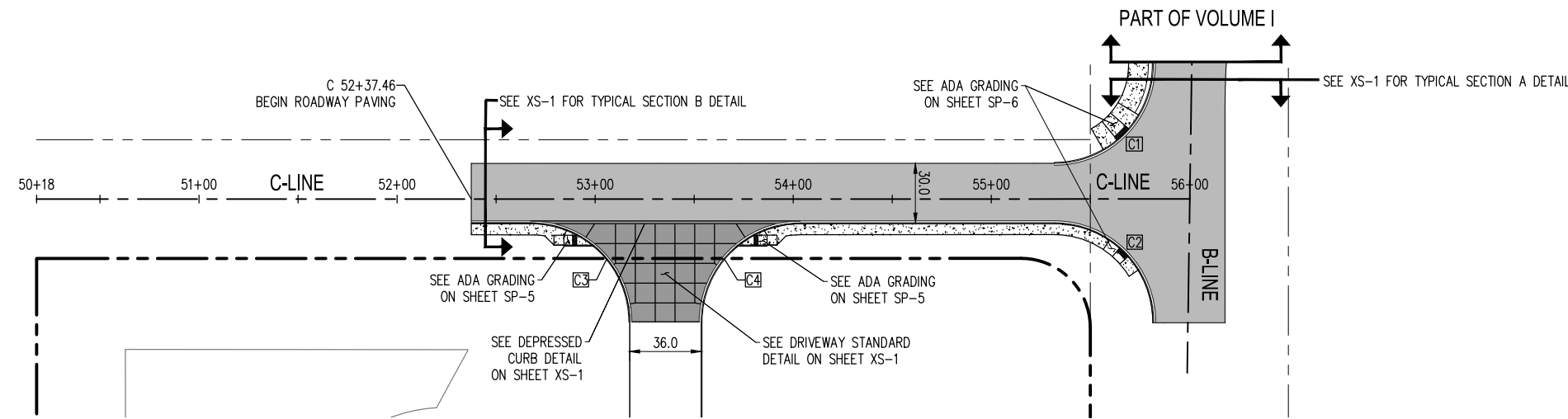
T. 23 N., R. 01 W., S. 21, W.M.

LEGEND

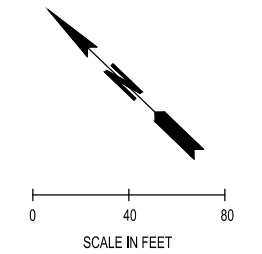
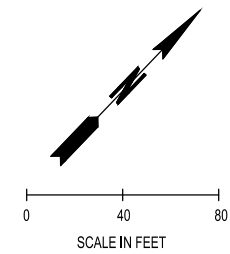
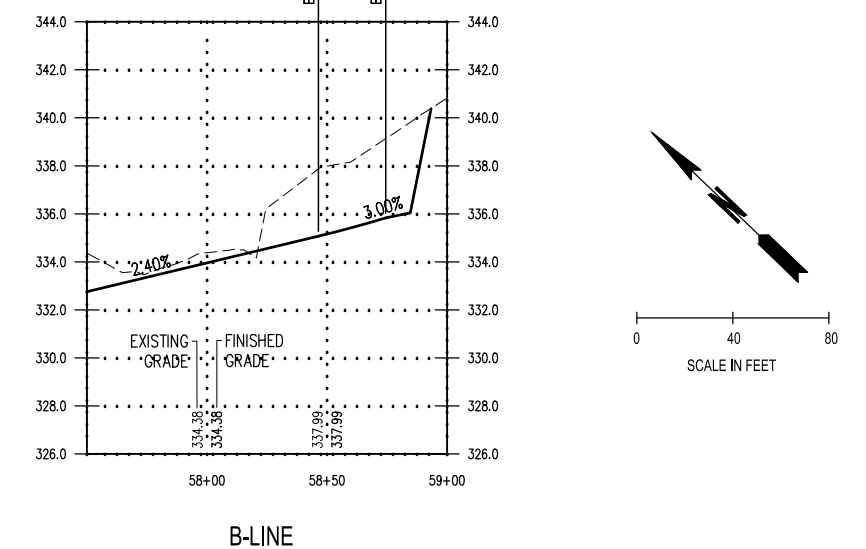
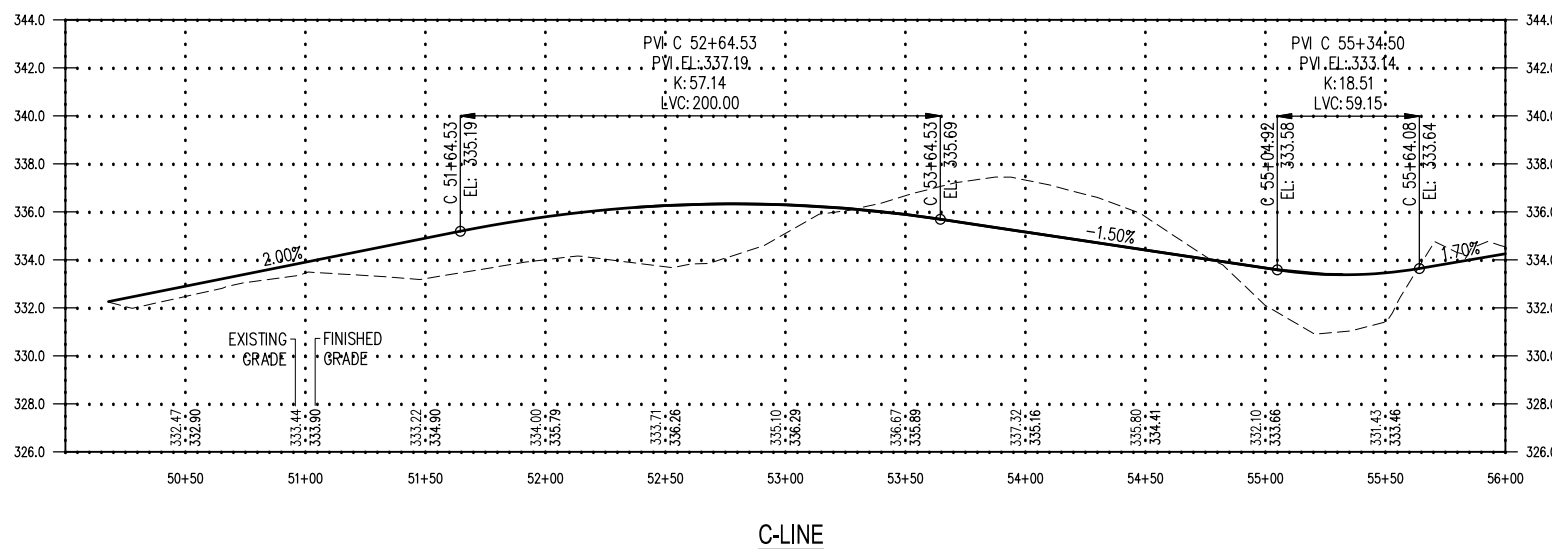
- PROPERTY LINE
- CEMENT CONCRETE TYPE C-1 CURB
(SEE DETAIL SHEET XS-1)
- CEMENT CONCRETE TRAFFIC CURB AND GUTTER
(SEE DETAIL SHEET XS-1)
- SIGN
- CONCRETE SIDEWALK
(SEE DETAIL SHEET XS-1)
- DETECTABLE WARNING PATTERN
- HEAVY DUTY ASPHALT PAVING
(SEE DETAIL SHEET XS-1)

INTERSECTION CURVE TABLE								ELEVATIONS				
No	BEGIN STA	OFFSET	END STA	OFFSET	RADIUS	LENGTH	DELTA	BEGIN ELEV	1/4 Δ ELEV	1/2 Δ ELEV	3/4 Δ ELEV	END ELEV
C1	B 57+46.24	19.44 RT	C 55+31.83	18.00 LT	50.00	78.54	89°59'52"	332.67	333.05	333.05	332.93	333.03
C2	C 55+32.00	12.00' RT	B 24+17.54	18.00 RT	50.00	78.54	90°00'08"	333.66	333.79	334.09	334.78	335.46
C3	C 52+67.46	12.00 RT	C 53+17.46	62.00 RT	50.00	78.54	90°00'09"	336.08	335.55	336.37	336.51	336.64
C4	C 53+53.46	62.00 RT	C 54+03.46	12.00 RT	50.00	78.54	90°00'14"	337.18	336.57	335.98	335.51	334.87

ELEVATIONS PROVIDED ARE TO BOTTOM FACE OF CURB WITHIN CURB LIMITS, OR TO EDGE OF PAVEMENT WHERE NO CURB EXISTS.



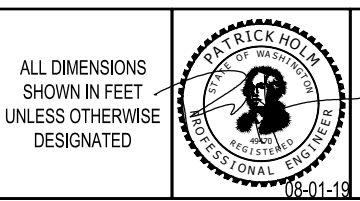
PM B: 58+60.42
 PM ELEV: 335.41
 K: 46.41
 LVC: 28.00
 B: 58+46.42 EL: 335.07
 B: 58+74.42 EL: 335.83



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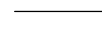
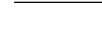
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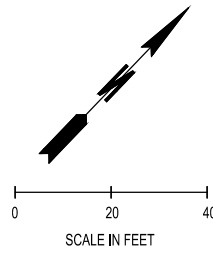
PROJECT NAME:

MASON TRANSIT AUTHORITY
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 PARK AND RIDE DEVELOPMENT
 PLAN, PROFILE, AND PAVING

DRAWING No.: PP-1
 SHEET No.: 8 of 11

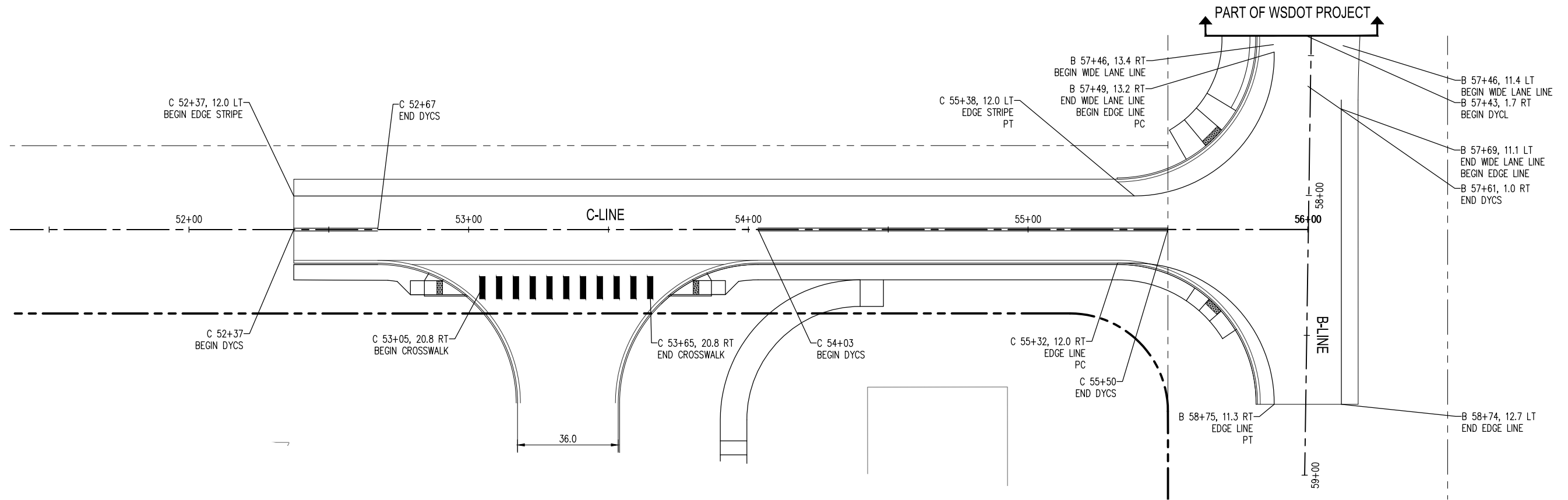
PAVEMENT MARKING LEGEND

-  PLASTIC CROSSWALK LINE (PER WSDOT STANDARD PLAN M-15.10)
-  WIDE LANE LINE (PER WSDOT STANDARD PLAN M-20.10)
-  EDGE STRIPE (PER WSDOT STANDARD PLAN M-20.10)
-  DOUBLE YELLOW CENTER STRIPE (DYCS) (PER WSDOT STANDARD DETAIL M-20.40)



PAVEMENT MARKING NOTES

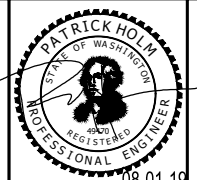
1. ALL PLASTIC SHALL BE TYPE A THERMOPLASTIC PER WSDOT STANDARD SPECIFICATIONS SEC. 9-34.
2. SEE WSDOT STD PLAN M-20.40 FOR INSTALLATION OF SUPPLEMENTAL RAISED PAVEMENT MARKINGS.
3. ALL EDGE STRIPES ARE WHITE UNLESS OTHERWISE NOTED.
4. CENTER TRAFFIC ARROWS IN MIDDLE OF DESIGNATED LANE.
5. ALL STRIPING SHALL BE RPM'S EXCEPT FOR BIKE LANE/GORE STRIPE



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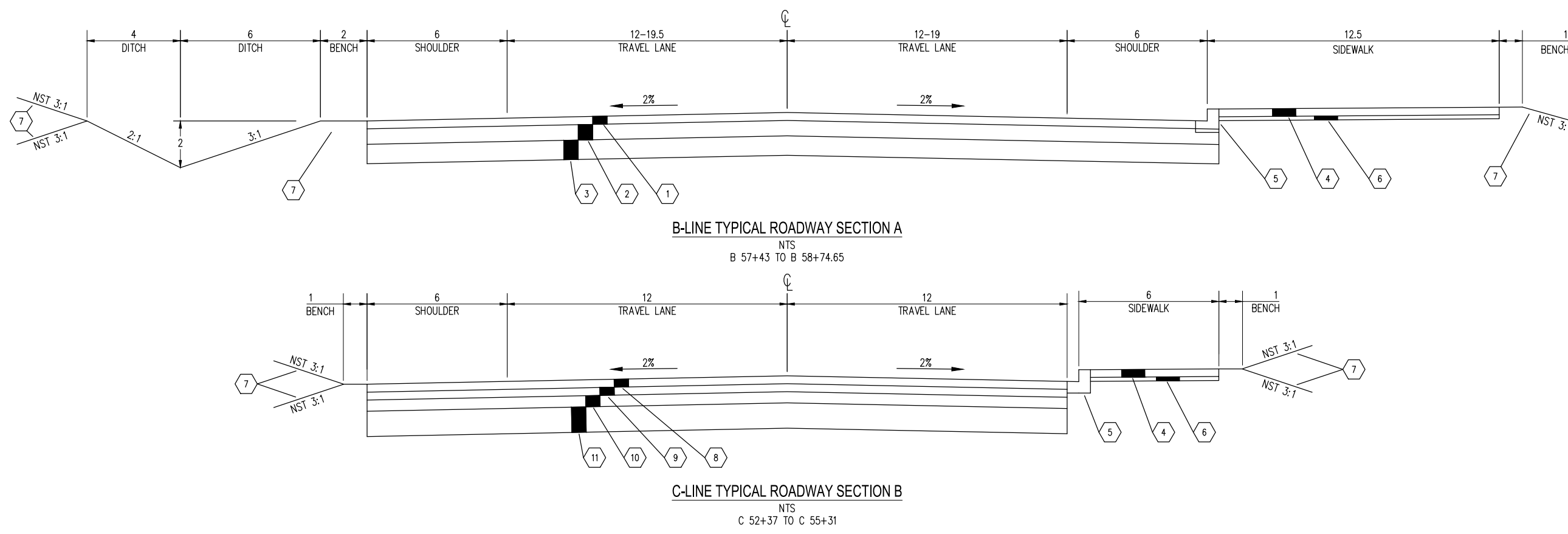
PROJECT NAME:



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PARK AND RIDE DEVELOPMENT

PAVEMENT MARKING

DRAWING No.: PM-1
SHEET No.: 9 of 11

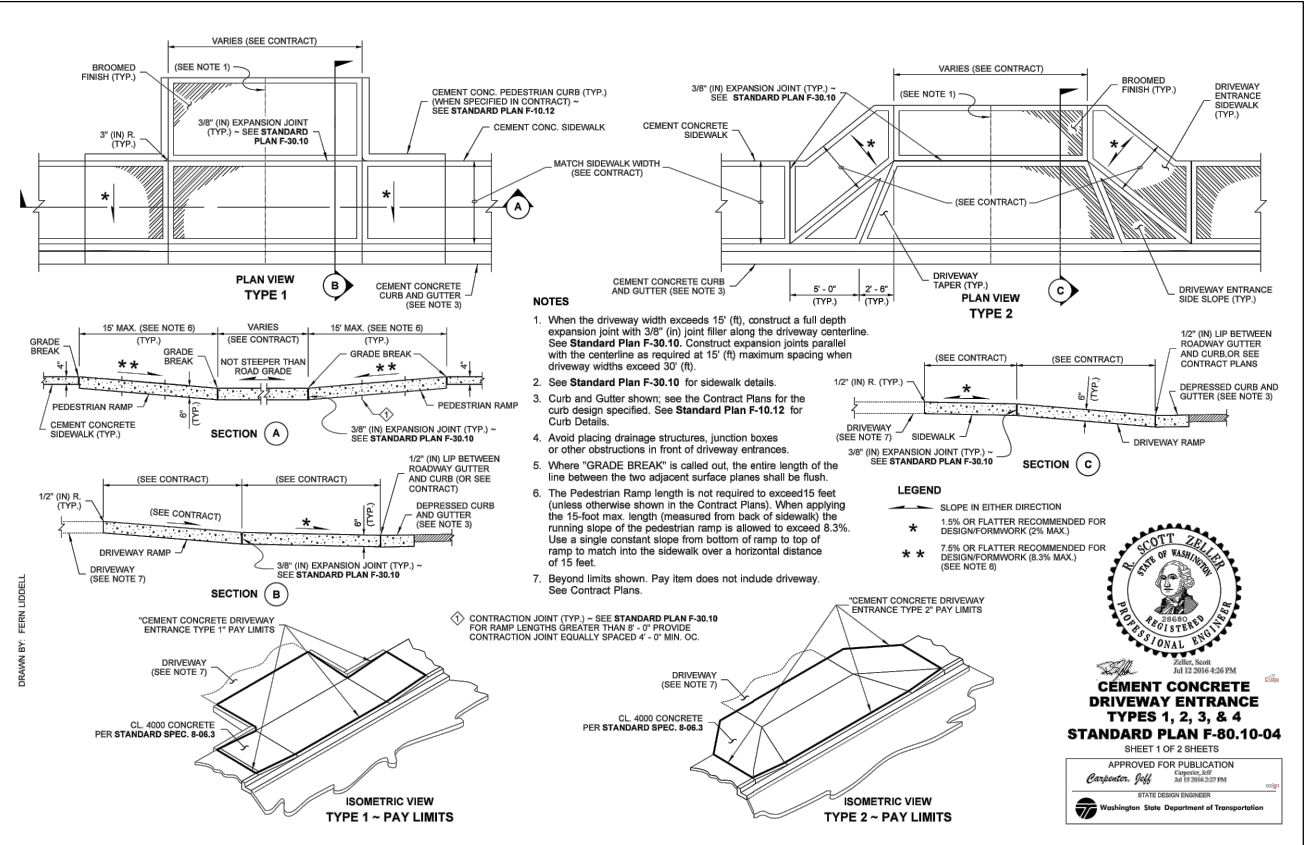
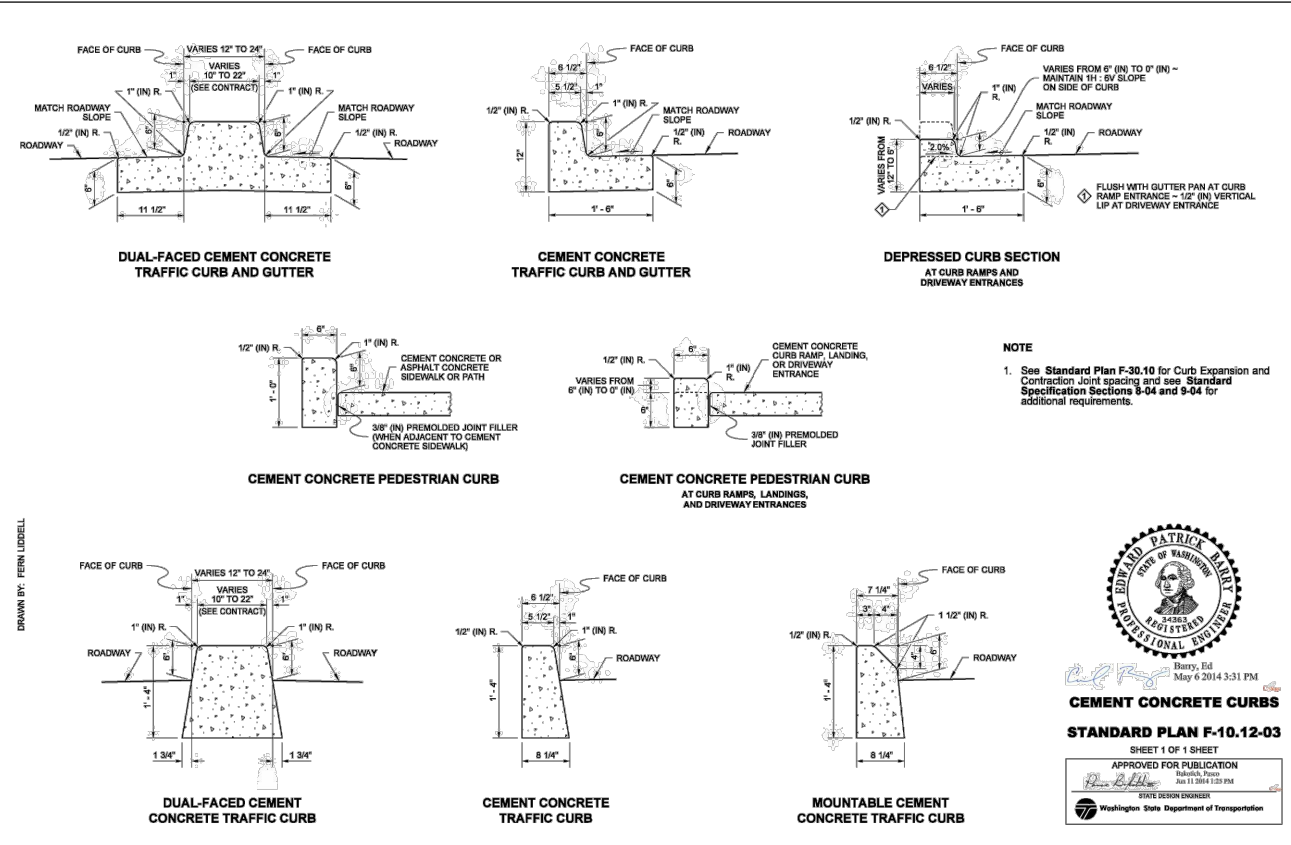


ROADWAY SECTION KEY NOTES:

- 1 0.15' HMA CL. 1/2" PG. 64-22
- 2 0.55' HMA CLASS 1/2" PG. 64-22
- 3 0.70' CRUSHED SURFACING BASE COURSE (CSBC)
- 4 CEMENT CONCRETE SIDEWALK (PER WSDOT STANDARD PLAN F-30.10)
- 5 CEMENT CONCRETE TRAFFIC CURB AND GUTTER (PER WSDOT STANDARD PLAN F-10.12)
- 6 0.17' CRUSHED SURFACING BASE COURSE (CSBC)
- 7 SEEDING, FERTILIZING, AND MULCHING
- 8 0.15 HMA CLASS 1/2" PG. 64-22
- 9 0.18' HMA CL. 1/2" PG. 64-22
- 10 0.33' CRUSHED SURFACING TOP COURSE (CSTC)
- 11 0.83' CRUSHED SURFACING BASE COURSE (CSBC)

GENERAL NOTES:

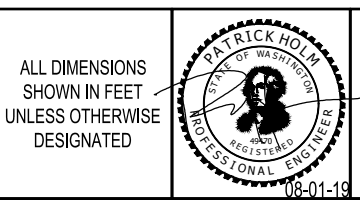
1. ALL SURFACING AND PAVING DEPTHS ARE COMPACTED DEPTHS.
 2. COURSES SHALL NOT EXCEED DEPTH SPECIFIED IN THE STANDARD SPECIFICATIONS.
 3. EXTEND FULL DEPTH PAVEMENT SECTION IN INTERSECTION AREA TO PAVING LIMITS SHOW ON PP-1.
 4. NTS = NOT TO SCALE
 5. NST = NO STEEPER THAN
- UNLESS OTHERWISE NOTED



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REVISIONS	DATE	BY	DESIGNED BY:	ISSUE DATE:
			N. MAYFIELD	10-31-2018
			N. MAYFIELD	0738.05
			P. HOLM	0738.05-XS-1-B

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


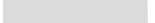
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PARK AND RIDE DEVELOPMENT

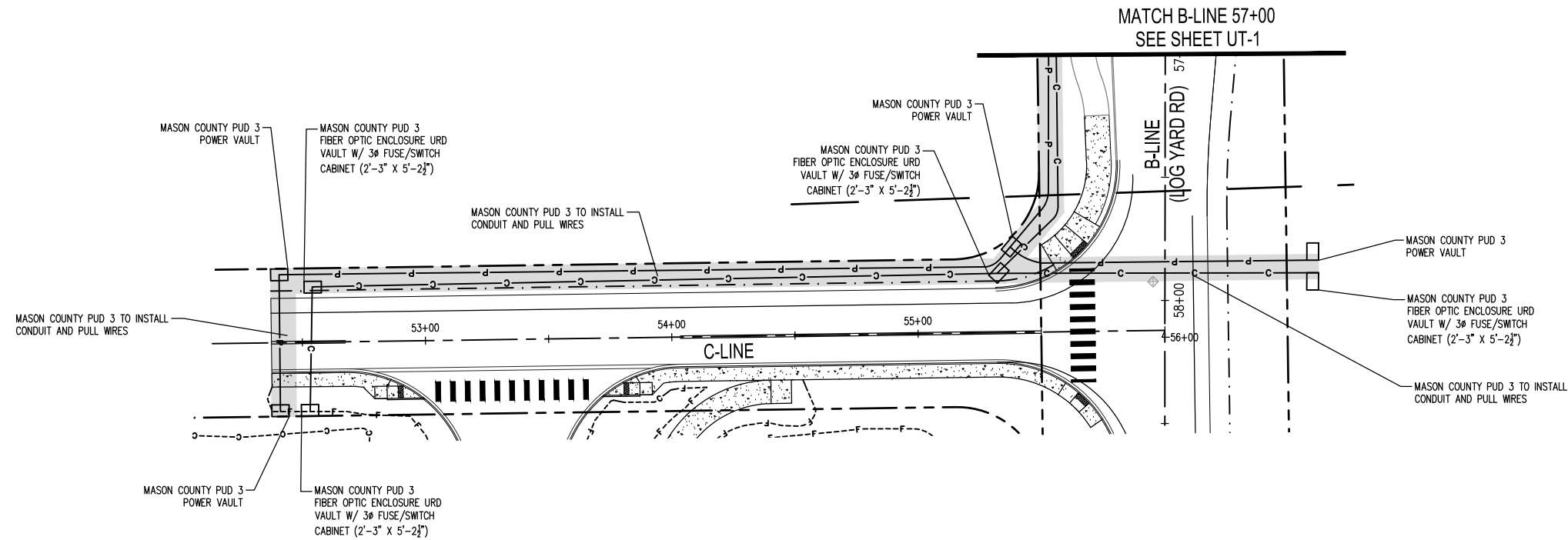
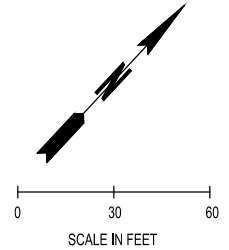
TYPICAL SECTION

NOTES

1. JOINT UTILITY TRENCH TO BE PROVIDED BY CONTRACTOR.
2. ALL MASON COUNTY PUD 3 AND CENTURY LINK CONDUIT AND WIRING TO BE PROVIDED AND INSTALLED BY RESPECTIVE OWNER.

LEGEND

-  PROPOSED 3φ FUSING CABINET (INSTALLED BY OTHERS)
-  PROPOSED FIBER OPTIC INTERCONNECT VAULT (INSTALLED BY OTHERS)
-  NEW UTILITY POLE (INSTALLED BY OTHERS)
-  3φ, 12.47 KV, UNDERGROUND POWER (INSTALLED BY OTHERS)
-  FIBER OPTIC CONDUIT (INSTALLED BY OTHERS)
-  JOINT UTILITY TRENCH (SEE DETAIL SHEET UT-1)

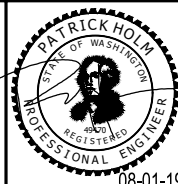


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1	FPS #1	04/08/19	PH	K. MELVIN	JUNE 2019
2	FPS #2	07/29/19	PH		

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CHECKED BY:	P. HOLM	DRAWING FILE No.:	0738.05-UT-1

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PROJECT NAME:



MASON TRANSIT AUTHORITY
BELFAIR
SR-3 AND LOG YARD RD INTERSECTION

UTILITY RELOCATION PLAN

DRAWING No.:
UT-2

SHEET No.:

11 of 11

MASON TRANSIT AUTHORITY
Log Yard Road and SR 3 Roundabout Project

APPENDIX A

Landau Geotechnical Engineering Report

**Geotechnical Engineering Report
Mason Transit Authority
Park and Ride Site Improvements
Belfair Site
Shelton, Washington**

July 15, 2019

Prepared for

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5	Preliminary Factored Infiltration Rates

APPENDICES

<u>Appendix</u>	<u>Title</u>
A	Field Explorations
B	Laboratory Testing

LIST OF ABBREVIATIONS AND ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ASTM	ASTM International
bgs	below ground surface
CBR	California Bearing Ratio
CSBC	crushed surfacing base course
ESAL	equivalent single-axle load
ft.	foot/feet
GDM	Geotechnical Design Manual
H:V	horizontal to vertical
IBC	International Building Code
LAI	Landau Associates, Inc.
MDD	maximum dry density
MTA	Mason Transit Authority
PCC	Portland cement concrete
pcf	pounds per cubic foot
PIT	pilot infiltration test
psf	pounds per square foot
SCJ	SCJ Alliance
SWMMWW	Stormwater Management Manual for Western Washington
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

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1.0 INTRODUCTION

This report presents the results of our field investigation and provides geotechnical engineering conclusions and recommendations for Mason Transit Authority's (MTA's) proposed Park and Ride Improvements project, located near the Mason County–Kitsap County border, southeast of the intersection of Log Yard Road and State Highway 3 near Belfair, Washington (site). The purpose of our investigation was to compile and review available subsurface information for the project area, complete site investigations to characterize subsurface soil and groundwater conditions, and develop geotechnical conclusions and recommendations for design of the proposed improvements.

The general project location is shown on Figure 1. Figure 2 shows some of the site features and the approximate locations of the explorations completed for this study. Appendix A includes a description of our field explorations and summary logs of the conditions observed during our field investigation. Test results and a description of our laboratory testing program are provided in Appendix B.

This report has been prepared based on conversations with and information provided by SCJ Alliance (SCJ), data collected during our field investigation, the results of our laboratory testing program, our familiarity with geologic conditions in the vicinity of the project area, and our experience with similar projects. Our services were provided in accordance with amendment number one to the subconsultant agreement for professional services, issued by SCJ on July 28, 2017 and authorized on August 1, 2017.

1.1 Project Understanding

We understand a park and ride will be constructed on an undeveloped, 4-acre site in a future commercial/industrial development near the Mason County–Kitsap County border. Proposed improvements include a 1,500-square-foot MTA office building, two bus shelters, illumination (i.e., light poles), paved parking and drive lanes, and stormwater management facilities. The proposed site layout is subject to minor changes and will be finalized during design.

1.2 Scope of Services

The objective of our services was to explore subsurface soil and groundwater conditions at the site as a basis for developing geotechnical recommendations in support of the proposed improvements. Our scope of services includes the following tasks:

- reviewing available published geologic maps and geotechnical reports for the project area;
- coordinating public and private utility locates;
- completing a subsurface exploration program by advancing a series of exploratory test pits;
- collecting representative soil samples and completing laboratory testing to aid in the classification and determination of certain engineering soil properties;

-
- providing seismic spectral acceleration coefficients for the proposed structures using map-based methods in accordance with International Building Code (IBC) criteria. We also assessed the risk for seismically induced soil liquefaction and lateral spreading;
 - providing recommendations for earthwork and grading, including stripping depth, subgrade preparation, utility trench excavation, construction dewatering, the reuse of onsite materials and structural fill, and structural fill placement and compaction;
 - providing geotechnical recommendations for shallow foundation support of the proposed bus shelters and MTA office building, including allowable soil bearing capacity, minimum footing width and depth, lateral resistance criteria, and elastic settlement estimates;
 - providing geotechnical recommendations for design of foundations for new illumination in accordance with section 17.2.1 of the Washington State Department of Transportation's *Geotechnical Design Manual* (WSDOT GDM; WSDOT 2015);
 - providing recommendations for pavement sections using assumed traffic loading conditions;
 - assessing the feasibility of infiltrating stormwater on site, including feasible infiltration locations, depth-to-groundwater, and a design infiltration rate estimated by correlation to grain size characteristics; and
 - preparing this geotechnical engineering report, summarizing the results of our field investigation and laboratory testing program and presenting our conclusions and recommendations along with supporting data.

2.0 EXISTING CONDITIONS

The following sections describe the surface conditions observed during our field explorations, the results of our geologic review, our subsurface exploration program, and the subsurface soil and groundwater conditions observed in our explorations.

2.1 Surface Conditions

The site includes undeveloped forestland with several trails and primitive gravel roads. Topography is generally flat in the areas of the proposed improvements, though the eastern portion of the site slopes gently down to the west with a vertical relief of about 10 feet (ft). The site is vegetated with mostly trees and some brush. Evidence of surface water or ponding was not observed during our August 2017 site visits.

2.2 Geologic Review

The geology of the area is described on the *Geologic Map of the Belfair 7.5-minute Quadrangle, Mason, Kitsap, and Pierce Counties, Washington* (Polenz 2009). Vashon glacial ice-contact deposits (Qgic) are mapped at the project site, with Vashon till (Qgt) mapped to the east. Ice-contact deposits are described as sand, gravel, lodgment till, and flow till with minor silt and clay beds. This unit is light brown to gray, loose to compact, and massive to well stratified. The unit was formed in the presence of meltwater alongside ice, generally near the end of the glaciation, and commonly is accompanied by stagnant-ice features, such as kettles, eskers, and subglacial outwash channels. The soils observed in our explorations are consistent with the mapped geology.

2.3 Subsurface Explorations

We explored subsurface conditions at the site on August 15, 2017 by advancing 10 test pits (TP-1 through T-10) between 12.5 and 16.3 ft below ground surface (bgs). The test pits were advanced by Howard's Construction & Excavating of Olympia, Washington, under subcontract to Landau Associates, Inc. (LAI). The approximate locations of the test pits are shown on Figure 2. The following sections summarize the subsurface conditions observed in our explorations. More detailed information, including summary exploration logs, is provided in Appendix A.

2.3.1 Soil Conditions

We categorized the soils observed in our explorations into two general units:

- **Forest duff/topsoil:** A forest duff/topsoil layer was observed in all the explorations, except test pit TP-1, where the forest duff was removed at the time the primitive gravel road was constructed. The combined thickness of the forest duff and topsoil ranged from 0.75 to 2.5 ft. Forest duff detritus observed typically included leaves, fir needles, and other non-decomposed organics above the soil surface. Where observed in our explorations, the thickness of the forest duff layer ranged from 3 to 12 inches. The topsoil observed at the

surface in test pit TP-1 and below the forest duff at the remaining test pit locations was typically a brown, loose to medium dense, silty sand with variable gravel and organic content.

- **Ice-contact deposits:** Ice-contact deposits were observed below the forest duff/topsoil unit to the depths explored. This unit typically consists of brown to gray, medium dense to very dense sand with variable silt, gravel, and cobble content or brown to gray, dense to very dense gravel with variable silt, sand, and cobble content.

Although not observed in all of our explorations, cobbles and boulders are often present in glacial deposits and may be present throughout the site. The contractor should be prepared to handle oversized material.

2.3.2 Groundwater Conditions

During our August 2017 explorations, groundwater was not observed in the test pits to 16.3 ft bgs, the maximum depth explored. No evidence of mottling was observed. The groundwater conditions reported herein and on the exploration logs in Appendix A are for the specific locations and date indicated and may not be indicative of other locations and/or times. Furthermore, we anticipate groundwater conditions will vary depending on local subsurface conditions, weather conditions, and other factors. Groundwater levels in the project area are expected to fluctuate seasonally, with maximum groundwater levels occurring during late winter and early spring.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our field explorations, laboratory testing, and engineering analyses, it is our opinion that subsurface conditions at the project site are suitable for the proposed improvements. We interpret the ice-contact deposits to be suitable for onsite infiltration of stormwater, provided the base of the infiltration facility is situated below restrictive layers. The ice-contact deposits observed in our explorations are also suitable for shallow foundation support of structures (e.g., bus pad, shelters, MTA office building, and light poles), provided the recommendations in Section 3.1 of this report are followed.

The following sections of this report provide geotechnical conclusions and recommendations pertaining to earthwork; underground utilities; structures, including seismic design criteria, allowable bearing capacity, foundation settlement, resistance to lateral loads, footing overexcavations, and slabs-on-grade; illumination; pavement design; and stormwater infiltration.

3.1 Earthwork

To accommodate construction of the proposed improvements, earthwork likely will include clearing, grubbing, and stripping of areas where improvements are planned; cuts and fills; subgrade preparation for structures and pavement areas; and construction of temporary and permanent slopes.

3.1.1 Wet Weather Considerations

Some of the onsite soils contain up to about 16 percent fines (material passing the U.S. Standard No. 200 sieve, by weight) and are considered moisture sensitive. Imported fill also could be moisture sensitive. When the moisture content of soil is more than a few percent above or below the optimum moisture content, the soil may become unstable, and meeting the required compaction criteria may be difficult. Optimum moisture content is the moisture content at which the greatest compacted dry density can be achieved. Disturbance of near surface soils should be expected if earthwork is completed during periods of wet weather or under wet conditions.

The wet weather season in the project area generally begins in late October and continues through June. However, periods of wet weather may occur throughout the year. If wet weather earthwork is unavoidable, we recommend:

- the ground surface be sloped so that surface water is collected and directed away from the work area to an approved collection/dispersion point;
- excavation of temporary drywells to expose cleaner underlying soils;
- earthwork activities not take place during periods of heavy precipitation;
- measures are taken to prevent onsite soil and soil stockpiles from becoming wet or unstable;
- structural fill materials used during periods of wet weather should be limited to imported, all-weather fill;

- a smooth-drum roller is used to seal the surface prior to periods of precipitation to reduce the extent to which the soil becomes wet or unstable;
- construction traffic is restricted to specific areas of the site, preferably areas surfaced with materials that are not susceptible to wet weather disturbance;
- a minimum 1-ft-thick layer of 4- to 6-inch quarry spalls is used in high-traffic areas to protect the subgrade soil from disturbance; and
- contingencies are included in the project schedule and budget to allow for the above elements.

3.1.2 Site Preparation Activities

Site preparation activities are expected to include clearing, grubbing, and stripping of the existing vegetation, duff, and topsoil and removal of pavement and utilities, if present. Sod, topsoil, and organic-rich soils or fill located within the bus pad shelter or pavement areas should be stripped. We estimate an average stripping depth of approximately 20 inches for removal of forest duff and near surface topsoil. If the forest duff is removed during logging activities, the remaining topsoil will range from 0.5 to 1.5 ft thick. These estimates do not include the removal of existing tree roots or debris, if present.

All incidental excavations associated with site preparation activities should be backfilled in accordance with the recommendations set forth in Section 3.1.4 of this report.

3.1.3 Subgrade Preparation

Prior to placing structural fill, the prepared subgrade should be proof-rolled in the presence of a qualified civil or geotechnical engineer, who is familiar with the site conditions and can check for any soft and/or disturbed areas. Areas of limited access that cannot be proof-rolled can be evaluated using a steel T-probe. Loose and/or disturbed subgrades identified during the proof-roll should be repaired by overexcavating the disturbed soil and replacing it with compacted structural fill, meeting the requirements described in Section 3.1.4 of this report. Unsuitable soils also can be repaired with additional scarification, moisture conditioning, and recompacting. Repaired subgrades should be recompacted in accordance with Section 3.1.4.5 of this report.

3.1.4 Structural Fill

The following sections provide recommendations for the use of onsite soils, imported fill, and recycled materials as structural fill and structural fill placement and compaction.

3.1.4.1 General

The suitability of excavated or imported soil for use as structural fill will depend on the gradation and moisture content of the soil when it is placed. As the amount of fines increases, the soil becomes increasingly sensitive to small changes in moisture content, and adequate compaction may become more difficult to achieve. Soil containing more than about 5 percent fines cannot be compacted

consistently to a dense, non-yielding condition when the water content is more than about 2 to 3 percent above or below optimum moisture content.

During dry, warm weather (generally July through early October), structural fill should consist of well-graded sand and gravel with a maximum particle size of 6 inches and at least 75 percent of the material passing the 3-inch sieve. The material should contain less than 30 percent fines and be maintained at a moisture content near optimum. If wet weather construction is anticipated, the amount of fines should not exceed 5 percent, based on the minus $\frac{3}{4}$ -inch fraction. Structural fill should be free of debris, organic material, and rock fragments larger than 6 inches.

3.1.4.2 Imported Fill

During dry, warm weather (generally July through early October), imported structural fill should consist of well-graded sand and gravel with a maximum particle size of 6 inches and at least 75 percent of the material passing the 3-inch sieve. The material should contain less than 30 percent fines and be maintained at a moisture content near optimum. Imported structural fill should be free of debris, organic material, and rock fragments larger than 6 inches.

During wet weather conditions, imported all-weather fill should consist of well-graded sand and gravel or crushed rock with a maximum particle size of 4 inches and less than 5 percent passing a U.S. Standard No. 200 sieve, based on the minus $\frac{3}{4}$ -inch fraction. Organic matter, debris, or other deleterious material should not be present. Gravel Borrow, as described in Section 9-03.14(1) of the Washington State Department of Transportation's *2016 Standard Specifications for Road, Bridge, and Municipal Construction (2016 WSDOT Standard Specifications)*, is a suitable source of imported all-weather fill, provided the requirements set forth in this paragraph are satisfied.

3.1.4.3 Onsite Soil

The ice-contact deposits observed in our explorations contain up to about 16 percent fines and are generally well suited for use as structural fill during dry weather. If onsite soils are reused as structural fill, they will require significant moisture conditioning to satisfy the compaction criteria recommended herein. We recommend a representative of LAI is present to review onsite material for use as structural fill prior to placement.

3.1.4.4 Recycled Materials

If practical, recycled concrete materials can be considered for use as structural fill. Recycled concrete materials used as structural fill should meet the requirements set forth in Section 9-03.21 of the *2016 WSDOT Standard Specifications*; the materials also must meet the minimum gradation criteria for Select Borrow, outlined in Section 9-03.14(2) of the *2016 WSDOT Standard Specifications*. In all instances, use of recycled concrete should comply with current environmental policies.

3.1.4.5 Fill Placement and Compaction

Structural fill should be placed on an approved subgrade that consists of uniformly firm and unyielding, inorganic native soils or compacted structural fill prepared as described in Section 3.1.3 of this report. Structural fill should be compacted at a near-optimum moisture content. Optimum moisture content varies with the soil gradation and should be evaluated during construction.

In structure and pavement areas, structural fill should be placed and compacted in accordance with Section 2-03.3(14)C, Method C of the *2016 WSDOT Standard Specifications*. Method A of the *2016 WSDOT Standard Specifications* is appropriate for non-structural areas, such as landscaping. Structural fill should be placed in loose, horizontal lifts, not exceeding 12-inch thickness, and thoroughly compacted. Compaction and moisture control tests should be completed in accordance with Section 2-03.3(14)D of the *2016 WSDOT Standard Specifications*. Alternatively, the maximum dry density (MDD) and optimum moisture content can be determined using ASTM International test method D1557 (i.e., modified Proctor).

3.1.5 Temporary and Permanent Slopes

Based on the soil conditions observed in our explorations, the maximum inclination for temporary excavation slopes less than 20 vertical ft in height, and in the absence of groundwater seepage, is 1½ horizontal to 1 vertical (1½H:1V). If groundwater is present, unstable conditions may develop in the temporary slope, and flatter slopes or shoring will be necessary. Temporary excavation slopes should be covered with plastic sheets, straw, or other materials to prevent erosion. In addition, the contractor should implement measures to prevent surface water runoff from entering excavations.

Temporary excavation slopes should be the responsibility of the contractor. All applicable local, state, and federal safety codes should be followed. Open cuts should be monitored by the contractor during excavation for evidence of instability. If instability is detected, the contractor should flatten the side slopes or install temporary shoring. If groundwater or groundwater seepage is present and the excavation is not properly dewatered, the soil may be prone to caving, channeling, and running.

Permanent cut-or-fill slopes constructed as recommended in this report should be sloped no steeper than 2H:1V. This ratio is not intended for use in the design of stormwater pond slopes; these slopes are typically 3H:1V or flatter and should be designed in compliance with local stormwater code requirements. Permanent slopes should be protected from erosion (see the preceding recommendations for protecting temporary excavations) and seeded or vegetated as soon as practical.

3.2 Site Utilities

The following sections provide geotechnical recommendations for design and construction of new site utilities. Geotechnical recommendations include trench excavation and support, construction

dewatering, pipe foundation support, pipe bedding and initial backfill, and trench backfill and compaction criteria.

Please note for any new utilities within the public right-of-way, local standards may supersede the following recommendations.

3.2.1 Trench Excavation and Support

We anticipate excavations for underground utilities will be primarily within the ice-contact deposits. Conventional construction equipment with sufficient reach should be able to excavate the proposed trenches to the expected depth of 12 ft bgs. Upon reaching the trench bottom, we suggest that a smooth-bladed bucket be used to remove any loose and/or disturbed soil. The final trench bottom should be firm and free of loose and disturbed soil.

Trench configurations and maintenance of safe working conditions, including temporary excavation stability, should be the responsibility of the contractor. All applicable local, state, and federal safety codes should be followed. Temporary excavations for utilities should be sloped no steeper than 1½H:1V, based on the governing regulations for safe excavation practice in the State of Washington (Washington State Department of Labor and Industries, Chapter 296-155 Washington Administrative Code [WAC]). If groundwater seepage is present, flatter slopes, temporary shoring, and/or dewatering may be required.

Trench boxes should provide adequate support for shallow excavations, provided the trench is properly dewatered and settlement-sensitive structures and utilities are not situated immediately adjacent to the excavation. Trench boxes should meet the requirements in Safety Standards for Construction Work, Part N (WAC Chapter 296-155).

3.2.2 Construction Dewatering

We anticipate underground utilities at the site can be installed without encountering significant groundwater. However, localized zones of perched groundwater may be encountered within the trench zone, particularly during the winter and spring months. If perched, water-bearing zones are encountered, construction dewatering using conventional sumps and pumps within the excavations should be sufficient to handle groundwater inflow. If dewatering is necessary, the contractor should be responsible for design and implementation of the dewatering system.

3.2.3 Pipe Foundation Support

Based on the conditions observed in our explorations, medium dense to very dense granular soils are expected to be present at the base of utility trenches. This soil type typically will provide adequate foundation support for utilities, provided the foundation soil remains in a relatively undisturbed condition. If the bottom of the trench becomes disturbed due to excavation and/or foot traffic during the laying of the pipe, the disturbed material should be overexcavated to expose undisturbed

foundation soil. The overexcavation should be backfilled with suitable foundation material to provide a firm trench bottom. Foundation material should be free of roots, topsoil, lumps of silt and clay, cobbles, and debris.

3.2.4 Pipe Bedding and Initial Backfill

Pipe zone bedding material should consist of crushed, processed, or naturally occurring granular material, free of organic matter and other deleterious material, and should meet the gradation requirements of Gravel Backfill for Pipe Zone Bedding outlined in Section 9-03.12(3) of the *2016 WSDOT Standard Specifications*.

Pipe bedding material should extend at least 6 inches below the invert of the pipe and be compacted to a relative density of at least 90 percent of the MDD (ASTM test method D1557). The initial pipe backfill should be brought up evenly around the pipe in relatively horizontal lifts, not exceeding 6 inches, and worked under the haunches of the pipe by slicing with a shovel, vibration, or other approved procedure. Pipe zone backfill should extend 6 inches above the crown of the pipe. In order to prevent damage to the pipe, the initial backfill directly over the pipe should be compacted with hand-operated compaction equipment. Specific material and compaction requirements provided by pipe manufacturers may supersede the recommendations provided in this report.

3.2.5 Trench Backfill and Compaction

Granular portions of the ice-contact deposits may be utilized for trench backfill, provided all soil particles greater than 4 inches in diameter are removed and the soil is properly moisture conditioned and compacted to the required density. Trench backfill should be compacted as described in Section 3.1.4.5 of this report.

3.3 Structures

The following sections provide geotechnical engineering conclusions and recommendations for foundation design of structures. Recommendations are provided for seismic design, allowable bearing capacity, settlement, resistance to lateral loads, footing excavations, drainage considerations, slabs-on-grade, and illumination pole foundations.

Table 1 provides a summary of design parameters for the structural engineer. The design parameters should be used in conjunction with the complete recommendations provided in this report.

Table 1. Summary of Design Parameters

Allowable soil bearing pressure = 3,500 pounds per square foot
Friction coefficient (factored) = 0.35
Passive resistance (factored) = 280 pounds per cubic foot
Minimum foundation width = 18 inches (continuous), 24 inches (isolated)
Maximum foundation width (for settlement considerations) = 5 feet (continuous), 10 feet (isolated)

3.3.1 Seismic Design Considerations

We understand that seismic design will be performed using the 2015 IBC standards (ICC 2014). The parameters listed in Table 2 can be used to compute seismic base shear forces.

Table 2. 2015 International Building Code Seismic Design Parameters

Spectral response acceleration at short periods (S_s) = 1.483g
Spectral response acceleration at 1-second periods (S_1) = 0.586g
Site class = C
Site coefficient (F_a) = 1.0
Site coefficient (F_v) = 1.3

g = force of gravity

The site is underlain by medium dense to very dense glacial deposits, and the groundwater table is relatively deep. On this basis, it is our opinion that there is a low risk for seismically induced soil liquefaction or lateral spreading at the site. Considering the location of the site with respect to the nearest known active crustal faults and the presence of a relatively thick layer of glacial deposits, it is our opinion that the risk of ground rupture due to surface faulting is low.

3.3.2 Bearing Capacity

We recommend an allowable soil bearing pressure of 3,500 pounds per square foot (psf) for shallow foundations that are established on medium dense to very dense glacial soils or structural fill extending to such soils. This allowable soil bearing pressure applies to long-term dead and live loads, exclusive of the weight of the footing and any overlying backfill. The allowable soil bearing pressure can be increased by one-third when considering total loads, including transient loads, such as those induced by wind and seismic forces.

The bus pad slab-on-grade foundation may utilize a thickened-edge slab design. For that reason, we recommend a minimum width of 18 inches for continuous footings. For settlement considerations, we have assumed a maximum width of 5 ft for continuous footings. For frost protection, footings should be embedded at least 12 inches below the lowest adjacent grade where the ground is flat adjacent to the footing.

3.3.3 Settlement

Settlement of shallow foundations will depend on the foundation size and bearing pressure as well as the strength and compressibility characteristics of the underlying bearing soil. Assuming construction is accomplished as previously recommended, we estimate the settlement of continuous or isolated spread footings will be on the order of 1 inch or less. Differential settlement between similarly loaded foundation elements may be assumed to be on the order of ½ inch or less.

3.3.4 Resistance to Lateral Loads

Resistance to lateral loads can be provided by friction acting on the base of footings and by passive lateral earth pressures acting against the sides of footings. An allowable coefficient of sliding resistance of 0.35, applied to the vertical dead loads only, may be used to compute frictional resistance. The allowable coefficient of sliding resistance includes a factor of safety of 1.5 on the calculated ultimate value. For design purposes, the passive resistance of properly compacted structural fill placed against the sides of foundations may be considered equivalent to a fluid with a density of 280 pounds per cubic foot (pcf). The foundation passive earth pressure has been reduced by a factor of 1.5 to limit deflections to less than 2 percent of the embedded depth. In addition, the recommended foundation passive earth pressure assumes drained conditions within the depth of the foundation.

The passive earth pressure and friction components can be combined, provided the passive component does not exceed two-thirds of the total. The top foot of soil should be excluded when calculating passive resistance unless the foundation perimeter area is covered by a slab-on-grade or pavement.

3.3.5 Footing Overexcavations

We do not anticipate that appreciable overexcavations will be required for the proposed improvements. Medium dense to very dense ice-contact deposits soils should be present at or within about 2 ft of the ground surface. However, overexcavations could be required if the soils become saturated or disturbed by foot traffic. If overexcavations are required, the overexcavation zone should extend a horizontal distance equal to at least one-half of the overexcavation depth on each side of the footing. For example, a 2-ft-wide footing with a 2-ft-deep overexcavation should have a 4-ft-wide overexcavation zone. All footing overexcavations should be backfilled with structural fill. Alternatively, the depth of the footing could be increased to bear on the base of the overexcavation. The base of the overexcavation should be evaluated by a qualified civil or geotechnical engineer prior to placement of structural fill or concrete.

3.3.6 Foundation Drainage Considerations

We recommend installing a footing drain around the perimeter of the proposed MTA office building. The drain should consist of a minimum 4-inch-diameter, perforated pipe surrounded by clean drain rock, wrapped in filter fabric. The drain pipe should be connected to a positive outlet and should include cleanouts. Roof drains should not be connected to footing drain.

3.3.7 Slabs-On-Grade

Slabs-on-grade should be established on a subgrade that consists of uniformly firm and unyielding soil. A modulus of vertical subgrade reaction (subgrade modulus) can be used to design the slab. The subgrade modulus varies based on the dimensions of the slab and the magnitude of applied loads on

the slab surface; slabs with larger dimensions and loads are influenced by soil to a greater depth. We recommend a subgrade modulus value of 225 pounds per cubic inch for the design of on-grade floor slabs with floor loads up to 500 psf. This subgrade modulus is for a 1-ft by 1-ft square plate and is not the overall modulus of a larger area. We are available to provide alternate recommendations during design, based on specific loading information available at that time.

3.3.8 Illumination Pole Foundations

Illumination structures (i.e., light poles) are proposed at the site. In our test pits, we observed medium dense to very dense soils with an estimated allowable lateral bearing pressure of 3,500 psf. The lateral bearing pressure provided was developed in general accordance with the methods described in Section 17.2.1 of the WSDOT GDM.

3.4 Pavement Design

Pavement sections should be constructed on a subgrade that consists of 1 ft of uniformly firm and unyielding, compacted native subgrade or imported structural fill as described in Section 3.1 of this report. The structural fill should be prepared as described in Section 3.1.4 of this report. The design pavement sections were developed using the American Association of State Highway and Transportation Officials' (AASHTO's) Guide for Design of Pavement Structures (AASHTO 1993). The standard duty asphalt pavement section recommendations provided in Table 3 assume a 20-year design life, a maximum equivalent single-axle load (ESAL) of 100,000, and an assumed California Bearing Ratio (CBR) of 12 percent for the section. The heavy-duty asphalt pavement section assumes at least 65 buses per day, a 20-year design life, a loading of 2,000,000 ESALs, and an assumed CBR of 12 percent for the section. The assumed CBR value is estimated to correspond to a subgrade soil with a density equal to 90 percent of the MDD, determined by ASTM test method D1557.

For any new pavement installed within the public right-of-way, local standards may supersede the recommendations below.

Table 3. Recommended Asphalt Pavement Design Section

Pavement Section Type	Asphalt Concrete Pavement Thickness	Crushed Surfacing Base Course Thickness	Compacted Native or Structural Fill Thickness
Standard duty	3 inches	4 inches	12 inches
Heavy duty	4 inches	4 inches	12 inches

Asphalt concrete should be Class B aggregate material or hot-mix asphalt class ½ inch, PG64-22, conforming to Section 5-04 of the *2016 WSDOT Standard Specifications*. The asphalt should be compacted to at least 91 percent of the Rice density. Base course material should be compacted to at least 95 percent of the MDD (ASTM test method D1557) and should meet the requirements for crushed surfacing base course (CSBC) in Section 9-03.9(3) of the *2016 WSDOT Standard Specifications*.

The upper 2 inches of crushed surfacing could consist of crushed surfacing top course to facilitate fine grading of the surface.

For our Portland cement concrete (PCC) pavement design, we assumed a design life of 20 years. For bus turnarounds, 2,000,000 ESALs were assumed in our rigid pavement design. A reliability of 85 percent, a terminal serviceability index of 2.5, a design serviceability loss of 2, and load transfer coefficient of 3.2 (assumes continuous reinforcement and tied shoulders) were used in the design. The design assumed a CBR of 12 percent (equates to a resilient modulus of 12,533) and at least 4 inches of CSBC placed below the PCC pavement. The following table summarizes the PCC pavement section for the bus turnarounds.

Table 4. Recommended Portland Cement Concrete Pavement Design Section

Pavement Section Type	Portland Cement Concrete Pavement Thickness	Crushed Surfacing Base Course Thickness	Compacted Native or Structural Fill Thickness
Heavy Duty	8 inches	4 inches	12 inches

Base course material should be compacted to at least 95 percent of the MDD determined using ASTM test method D1557 and should meet the requirements for CSBC in Section 9-03.9(3) of the *2016 WSDOT Standard Specifications*. PCC pavement should meet the requirements in Section 5-05 of the *2016 WSDOT Standard Specifications*. The pavement edges should be fully supported with either a thickened edge or an integral curb, and the joint spacing should be no more than 15 ft apart. To provide load transfer across the joints between panels, the panels should be fully doweled. Dowels should be placed at a depth of one-half the slab thickness and spaced 12 inches on center. The dowel bar diameter should be 1.5 inches and should have a minimum embedment of 9 inches on each side of the joint.

Prevention of road base saturation is essential for pavement durability. Thus, efforts should be made to limit the amount of water entering the base course.

3.5 Stormwater Infiltration Feasibility

Stormwater improvements may include ponds or underground infiltration facilities. Site soils suitable for stormwater infiltration were observed in our explorations but vary with depth and location. Groundwater was not observed during our site investigation in August 2017 to a maximum depth of 16.3 ft bgs. Groundwater levels in the project area are expected to fluctuate seasonally, with maximum groundwater levels occurring during the late winter and early spring months.

Long-term preliminary infiltration rates are provided in Table 5 and are based on the soil grain size infiltration rate determination methods in the Washington State Department of Ecology's *2005 Stormwater Management Manual for Western Washington (2005 SWMMWW)* and on the results of our laboratory tests (Appendix B). Appendix III-A of the *2005 SWMMWW* provides the method and

recommended correction factors to be used to estimate the infiltration rates. The following assumed correction factors were used to account for pond size ($CF_{size} = 1.0$), biofouling and siltation effects for ponds ($CF_{silt/bio} = 0.9$), and aspect ratio correction factor ($CF_{aspect} = 1.0$). We also assumed a ponded water depth of 4 ft and a depth-to-groundwater of 20 ft. These assumptions should be verified or modified in final design to calculate final infiltration rates.

The preliminary (factored) infiltration rates using the correction factors mentioned above are provided in Table 5. The highest estimated infiltration rates are for soils located in the vicinity of test pits TP-2, TP-3, TP-6, and TP-9 site. The rates assume at least 10 ft of separation to seasonal high groundwater.

Table 5. Preliminary Factored Infiltration Rates

Exploration Designation	Preliminary Factored Infiltration Rate(inches/hour)	Depth Interval (ft)
TP-2	0.9	1.0 – 12.5
TP-3	0.7	1.5 – 13.5
TP-4	0.3	2.0 – 14.0
TP-5	0.3	1.7 – 14.0
TP-6	0.4	2.0 – 13.0
TP-6	1.0	13.0 – 15.0
TP-9	1.8	2.5 – 14.0
TP-10	0.3	0.75 – 10.0
TP-10	0.1	10.0 – 14.0

ft = feet
TP = test pit

It is our opinion that the collection of seasonal high groundwater information is not warranted, given the site conditions. Final design infiltration rates should be confirmed by pilot infiltration test (PIT) evaluations at the specific locations and depths of the proposed facilities. Typically, the infiltration rates provided in Table 5 can be increased through the completion of onsite infiltration testing.

A roundabout is planned west of the site, at the intersection of Log Yard Road and State Highway 3. Soils in this area are mapped as ice-contact deposits. Because subsurface conditions are similar in both areas, site infiltration rates were extrapolated to the proposed roundabout location. We recommend a preliminary infiltration rate of 1 inch per hour for clean sand (SP, SW) and gravels (GP, GW). For silty sands (SP-SM, SW-SM, SM) and gravel with silt (GP-GM, GW-GM), we recommend a preliminary infiltration rate of 0.4 inches per hour. For predominantly silty soils (ML), we recommend a preliminary infiltration rate of 0.1 inch per hour. Compost-amended vegetated filter strips (CAVFS) are proposed for stormwater treatment.

4.0 CONSTRUCTION SUPPORT

Landau Associates, Inc. (LAI) should be asked to review the geotechnical portions of the plans and specifications for the proposed project in advance of project bidding. The purpose of the review is to verify that the recommendations presented in this geotechnical report have been properly interpreted and implemented in the design and project specifications.

We recommend that monitoring, testing, and consultation be provided during construction to confirm that the conditions observed are consistent with those indicated by our explorations, to provide expedient recommendations should conditions be revealed during construction that differ from those anticipated, and to evaluate whether geotechnical activities comply with the project plans, specifications, and the recommendations contained in this report. Such geotechnical activities include but are not limited to observation of foundation subgrades, compaction testing of structural fill, and observation of the prepared slab and pavement subgrades. The purpose of these services would be to observe compliance with the design concepts, specifications, and recommendations in this report. In the event subsurface conditions differ from those anticipated before the start of construction, LAI can provide revised recommendations appropriate to the conditions revealed during construction. LAI would be pleased to provide these services for you.

5.0 USE OF THIS REPORT

Landau Associates, Inc. prepared this report for the exclusive use of Mason Transit Authority and SCJ Alliance for the proposed Belfair Park and Ride Improvements project, located southeast of the intersection of Log Yard Road and State Highway 3 near Belfair, Washington. Within the limitations of scope, schedule, and budget, our services have been conducted in accordance with generally accepted practices of the geotechnical engineering profession; no other warranty, express or implied, is made as to the professional advice included in this report.

The conclusions and recommendations contained in this report are based on the conditions observed/interpreted in the explorations advanced for this study and on our experience in the project area. There may be some variation in subsurface soil and groundwater conditions, and the nature and extent of the variations may not become evident until construction. Accordingly, a contingency for unanticipated conditions should be included in the construction budget and schedule.

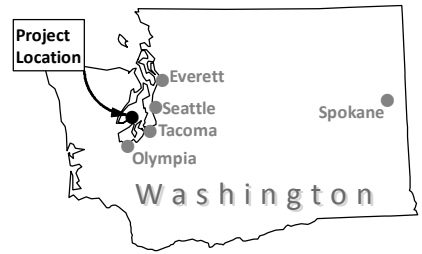
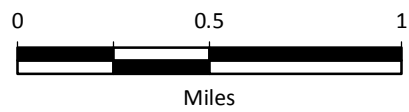
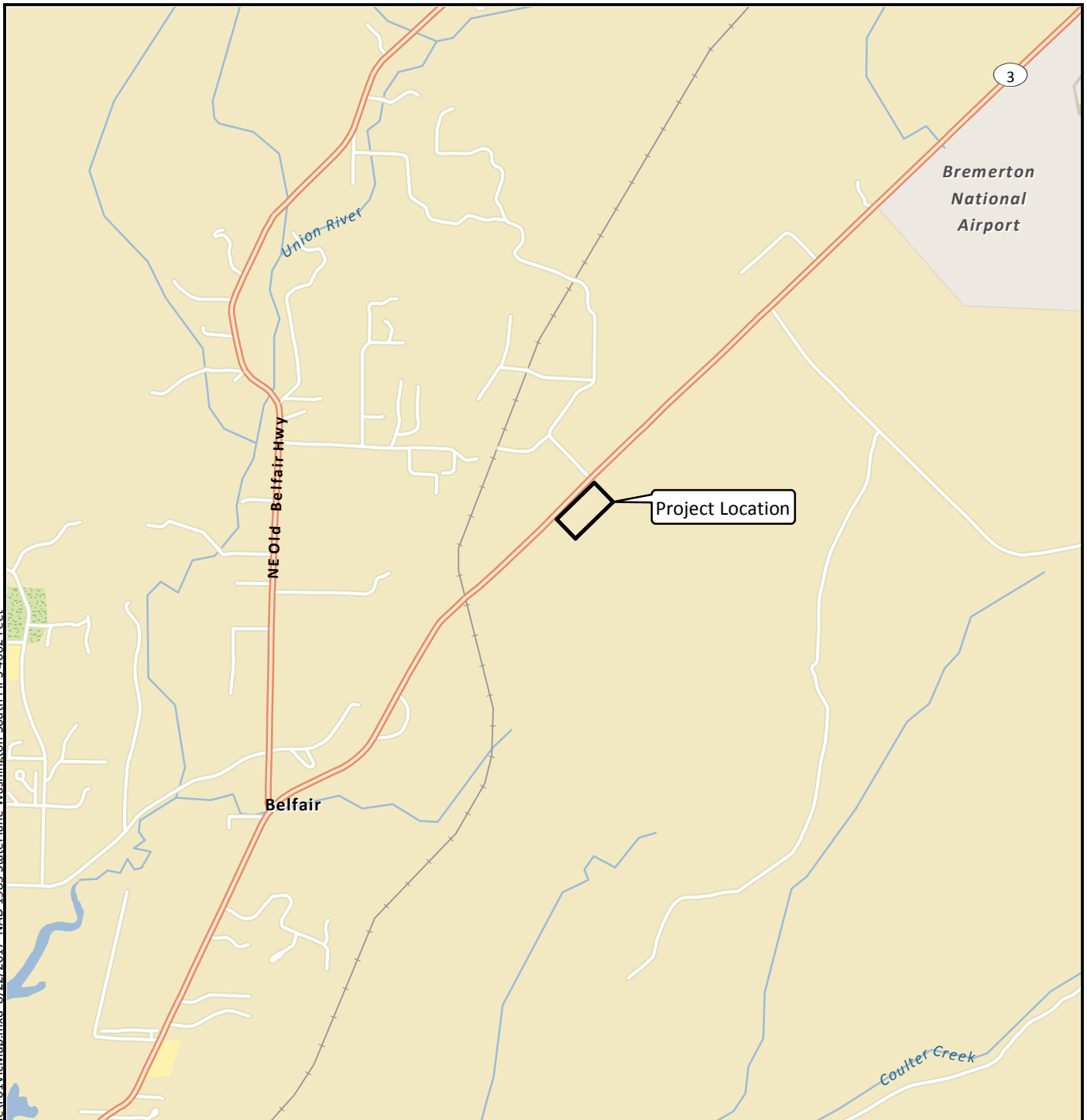
If variations in subsurface conditions are encountered during construction, LAI should be notified for review of the recommendations in this report and revision of such if necessary. If there is a substantial lapse of time between submission of this report and the start of construction, we recommend that we review this report to determine the applicability of the conclusions and recommendations contained herein.

We appreciate the opportunity to be of service to you on this project. Please contact us at (360) 791-3178 if you have questions or require additional information.

6.0 REFERENCES

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Data Source: Esri 2012

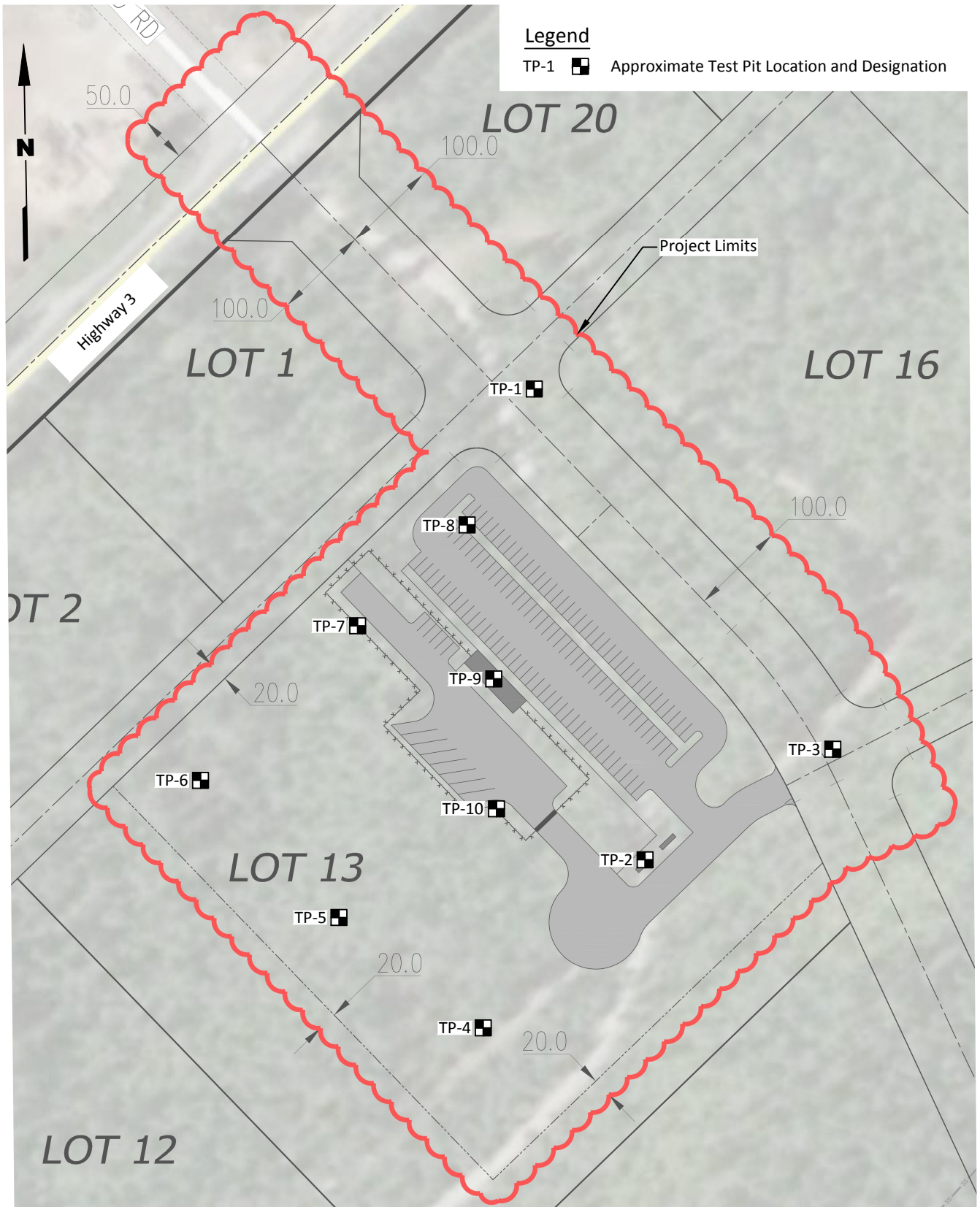
Mason Transit Authority
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 Belfair, Washington

Vicinity Map

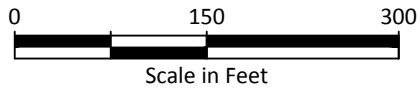
Figure
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Source: SCJ Alliance, 2017



Mason Transit Authority
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 Belfair, Washington

Site and Exploration Location Plan

Figure
2

Field Explorations

APPENDIX A FIELD EXPLORATIONS

Subsurface conditions at the site were explored on August 15, 2017 by advancing 10 test pits (TP-1 through TP-10) 12.5 to 16.3 feet below ground surface. The approximate locations of the explorations are shown on Figure 2. The test pits were advanced by Howard's Construction & Excavating of Olympia, Washington, under subcontract to Landau Associates, Inc. (LAI).

The field explorations were coordinated and monitored by LAI personnel, who also obtained representative soil samples, maintained a detailed record of the subsurface soil and groundwater conditions observed, and described the soil encountered by visual and textural examination. In general accordance with ASTM International test method D2488, *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*, each representative soil type observed was described using the soil classification system shown on Figure A-1. Logs of the explorations are presented on Figures A-2 through A-6. These logs represent LAI's interpretation of subsurface conditions identified during the field explorations. The stratigraphic contacts shown on the individual logs represent the approximate boundaries between soil types; actual transitions may be more gradual. A further discussion of the soil and groundwater conditions observed is contained in the main text of this report.

Samples obtained from the test pits were taken to LAI's soils laboratory for further examination and testing. The test results and a discussion of the testing procedures are presented in Appendix B. Upon completion of excavation and sampling, the test pits were backfilled with the excavated material. The backfill material was compacted using the bucket of the backhoe.

Soil Classification System

	MAJOR DIVISIONS	CLEAN GRAVEL (Little or no fines)	GRAPHIC SYMBOL	LETTER SYMBOL ⁽¹⁾	TYPICAL DESCRIPTIONS ⁽²⁾⁽³⁾
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
		CLEAN SAND (Little or no fines)		SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)	SILT AND CLAY (Liquid limit less than 50)		ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
		SILT AND CLAY (Liquid limit less than 50)		CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
		SILT AND CLAY (Liquid limit less than 50)		OL	Organic silt; organic, silty clay of low plasticity
	SILT AND CLAY (Liquid limit greater than 50)	SILT AND CLAY (Liquid limit greater than 50)		MH	Inorganic silt; micaceous or diatomaceous fine sand
		SILT AND CLAY (Liquid limit greater than 50)		CH	Inorganic clay of high plasticity; fat clay
		SILT AND CLAY (Liquid limit greater than 50)		OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL		PT	Peat; humus; swamp soil with high organic content	

OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

- Notes:
- USCS letter symbols correspond to symbols used by the Unified Soil Classification System and ASTM classification methods. Dual letter symbols (e.g., SP-SM for sand or gravel) indicate soil with an estimated 5-15% fines. Multiple letter symbols (e.g., ML/CL) indicate borderline or multiple soil classifications.
 - Soil descriptions are based on the general approach presented in the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the Standard Test Method for Classification of Soils for Engineering Purposes, as outlined in ASTM D 2487.
 - Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:
 - Primary Constituent: > 50% - "GRAVEL," "SAND," "SILT," "CLAY," etc.
 - Secondary Constituents: > 30% and ≤ 50% - "very gravelly," "very sandy," "very silty," etc.
 - > 15% and ≤ 30% - "gravelly," "sandy," "silty," etc.
 - Additional Constituents: > 5% and ≤ 15% - "with gravel," "with sand," "with silt," etc.
 - ≤ 5% - "with trace gravel," "with trace sand," "with trace silt," etc., or not noted.
 - Soil density or consistency descriptions are based on judgement using a combination of sampler penetration blow counts, drilling or excavating conditions, field tests, and laboratory tests, as appropriate.

Drilling and Sampling Key		Field and Lab Test Data
SAMPLER TYPE	SAMPLE NUMBER & INTERVAL	
Code	Description	Code
a	3.25-inch O.D., 2.42-inch I.D. Split Spoon	PP = 1.0
b	2.00-inch O.D., 1.50-inch I.D. Split Spoon	TV = 0.5
c	Shelby Tube	PID = 100
d	Grab Sample	W = 10
e	Single-Tube Core Barrel	D = 120
f	Double-Tube Core Barrel	-200 = 60
g	2.50-inch O.D., 2.00-inch I.D. WSDOT	GS
h	3.00-inch O.D., 2.375-inch I.D. Mod. California	AL
i	Other - See text if applicable	GT
1	300-lb Hammer, 30-inch Drop	CA
2	140-lb Hammer, 30-inch Drop	
3	Pushed	
4	Vibrocore (Rotasonic/Geoprobe)	
5	Other - See text if applicable	

Groundwater	
	Approximate water level at time of drilling (ATD)
	Approximate water level at time other than ATD

TP- 1

SAMPLE DATA				SOIL PROFILE		GROUNDWATER
Depth (ft)	Elevation (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol
	Excavation Method: <u>Excavator</u>					Ground Elevation (ft): <u>Not Measured</u>
0						
5	S-1	d			SM	Brown, silty, fine to coarse SAND with gravel and organics (medium dense, dry to moist) (TOPSOIL) Brown, fine to coarse SAND with gravel and silt (medium dense, moist) (ICE CONTACT) -Grades to light brown and dense at 2.5 ft bgs
10	S-2	d			SP-SM	
15	S-2 S-4	d d			GP	Light brown, sandy, fine to coarse GRAVEL with cobbles (dense, moist)
20	Test Pit Completed 08/15/17 Total Depth of Test Pit = 15.5 ft.					

TP- 2

SAMPLE DATA				SOIL PROFILE		GROUNDWATER
Depth (ft)	Elevation (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol
	Excavation Method: <u>Excavator</u>					Ground Elevation (ft): <u>Not Measured</u>
0						
5	S-1	d		W = 4 GS	SM	6 inches of forest duff (FOREST DUFF) Brown, silty, fine to coarse SAND with organics (loose, dry to moist) (TOPSOIL) Brown, gravelly, fine to coarse SAND with silt (dense, moist) (ICE CONTACT) -Grades to gray at 5.5 ft bgs
10	S-2	d			SP-SM	
15	S-3	d			SM	Groundwater not encountered.
20	Test Pit Completed 08/15/17 Total Depth of Test Pit = 12.5 ft.					

- Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
 2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
 3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

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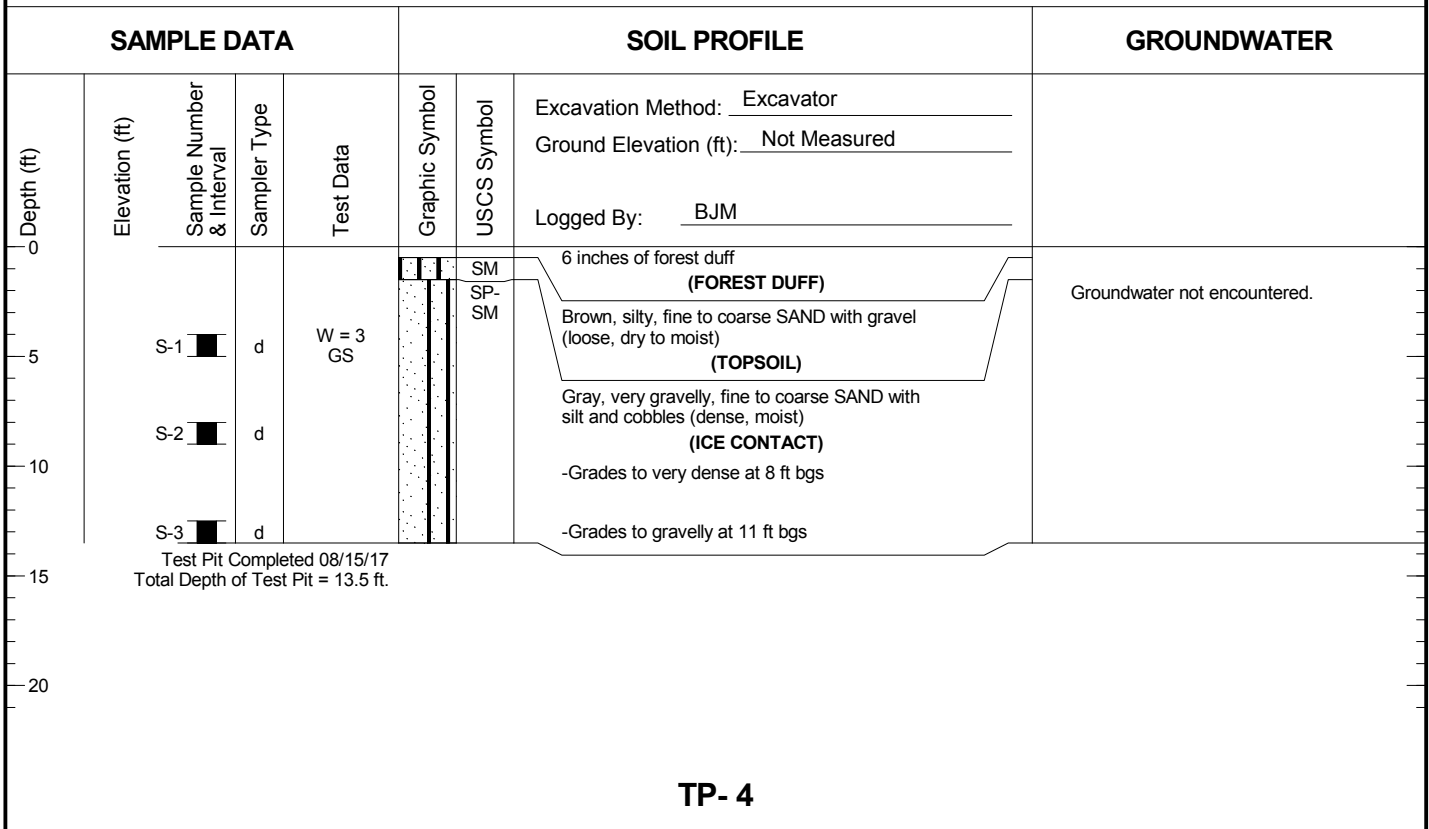


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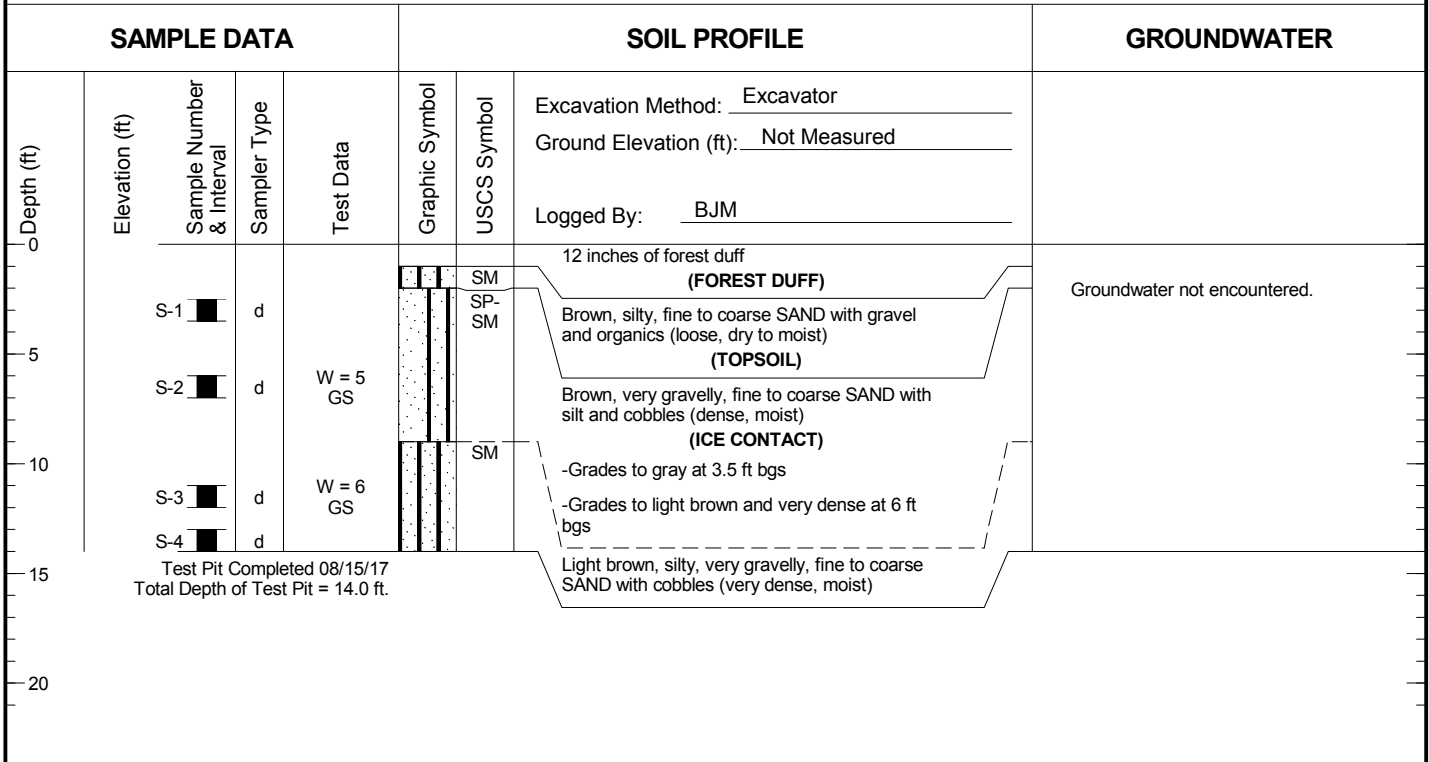
Log of Test Pits

Figure
A-2

TP- 3



TP- 4



- Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
 2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
 3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

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Log of Test Pits

Figure
A-3

TP- 5

SAMPLE DATA		SOIL PROFILE				GROUNDWATER		
Depth (ft) 0 5 10 15 20	Elevation (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	Excavation Method: <u>Excavator</u> Ground Elevation (ft): <u>Not Measured</u> Logged By: <u>BJM</u>	Groundwater not encountered.
	S-1	d	W = 6 GS	SM SM	8 inches of forest duff (FOREST DUFF) Brown, silty, fine to coarse SAND with gravel and organics (loose, dry to moist) (TOPSOIL)	Light reddish brown, silty, very gravelly, fine to coarse SAND (dense, moist) (ICE CONTACT) -Grades to gray and gravelly at 5 ft bgs -Grades to with cobbles at 7.5 ft bgs		
	S-2	d	W = 6 GS					
	S-3	d						
Test Pit Completed 08/15/17 Total Depth of Test Pit = 14.0 ft.								

TP- 6

SAMPLE DATA		SOIL PROFILE				GROUNDWATER		
Depth (ft) 0 5 10 15 20	Elevation (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	Excavation Method: <u>Excavator</u> Ground Elevation (ft): <u>Not Measured</u> Logged By: <u>BJM</u>	Groundwater not encountered.
	S-1	d	W = 6 GS	GP- GM	6 inches of forest duff (FOREST DUFF) Brown, silty, fine to coarse SAND with gravel and organics (loose, dry to moist) (TOPSOIL)	Brown, very sandy, fine to coarse GRAVEL with silt (very dense, moist) (ICE CONTACT) -Grades to gray at 6 ft bgs		
	S-2	d						
	S-3	d	W = 4 GS	GP	Gray, very sandy, fine to coarse GRAVEL (dense, moist)			
S-4	d	GP- GM		Gray, very sandy, fine to coarse GRAVEL with silt (dense, moist)				
Test Pit Completed 08/15/17 Total Depth of Test Pit = 16.0 ft.								

- Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
 2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
 3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1174015.01 9/15/17 Y:\1174015.01\BELFAIR SITE\1174015.01\GP TEST PIT LOG W/ ELEVATION



Mason Transit Authority
Park and Ride Improvements
Belfair Site
Belfair, Washington

Log of Test Pits

Figure
A-4

TP- 7

SAMPLE DATA				SOIL PROFILE		GROUNDWATER
Elevation (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	
0						Excavation Method: <u>Excavator</u> Ground Elevation (ft): <u>Not Measured</u> Logged By: <u>BJM</u>
0-5	S-1	d			SM	6 inches of forest duff (FOREST DUFF)
5-8					SP-SM	Brown, silty, fine to coarse SAND with gravel and organics (loose, dry to moist) (TOPSOIL)
8-10	S-2	d				Gray, fine to coarse SAND with gravel and silt (dense, moist) (ICE CONTACT)
10-15	S-3	d			GP	Light brown, sandy, fine to coarse GRAVEL (dense, moist)
Test Pit Completed 08/15/17 Total Depth of Test Pit = 15.0 ft.						

TP- 8

SAMPLE DATA				SOIL PROFILE		GROUNDWATER
Elevation (ft)	Sample Number & Interval	Sampler Type	Test Data	Graphic Symbol	USCS Symbol	
0						Excavation Method: <u>Excavator</u> Ground Elevation (ft): <u>Not Measured</u> Logged By: <u>BJM</u>
0-5	S-1	d			SM	6 inches of forest duff (FOREST DUFF)
5-8					SP-SM	Brown, silty, fine to coarse SAND with gravel and organics (loose, dry to moist) (TOPSOIL)
8-10	S-2	d				Light brown, gravelly, fine to coarse SAND with silt (very dense, moist) (ICE CONTACT)
10-15	S-3	d			SP	Brown to gray, fine to coarse SAND with gravel (dense, moist) -Grades to with cobbles at 10 ft bgs
Test Pit Completed 08/15/17 Total Depth of Test Pit = 15.0 ft.						

- Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
 2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
 3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1174015.01 9/15/17 Y:\1174015.01\BELFAIR SITE\1174015.01\GPJ TEST PIT LOG W/ ELEVATION

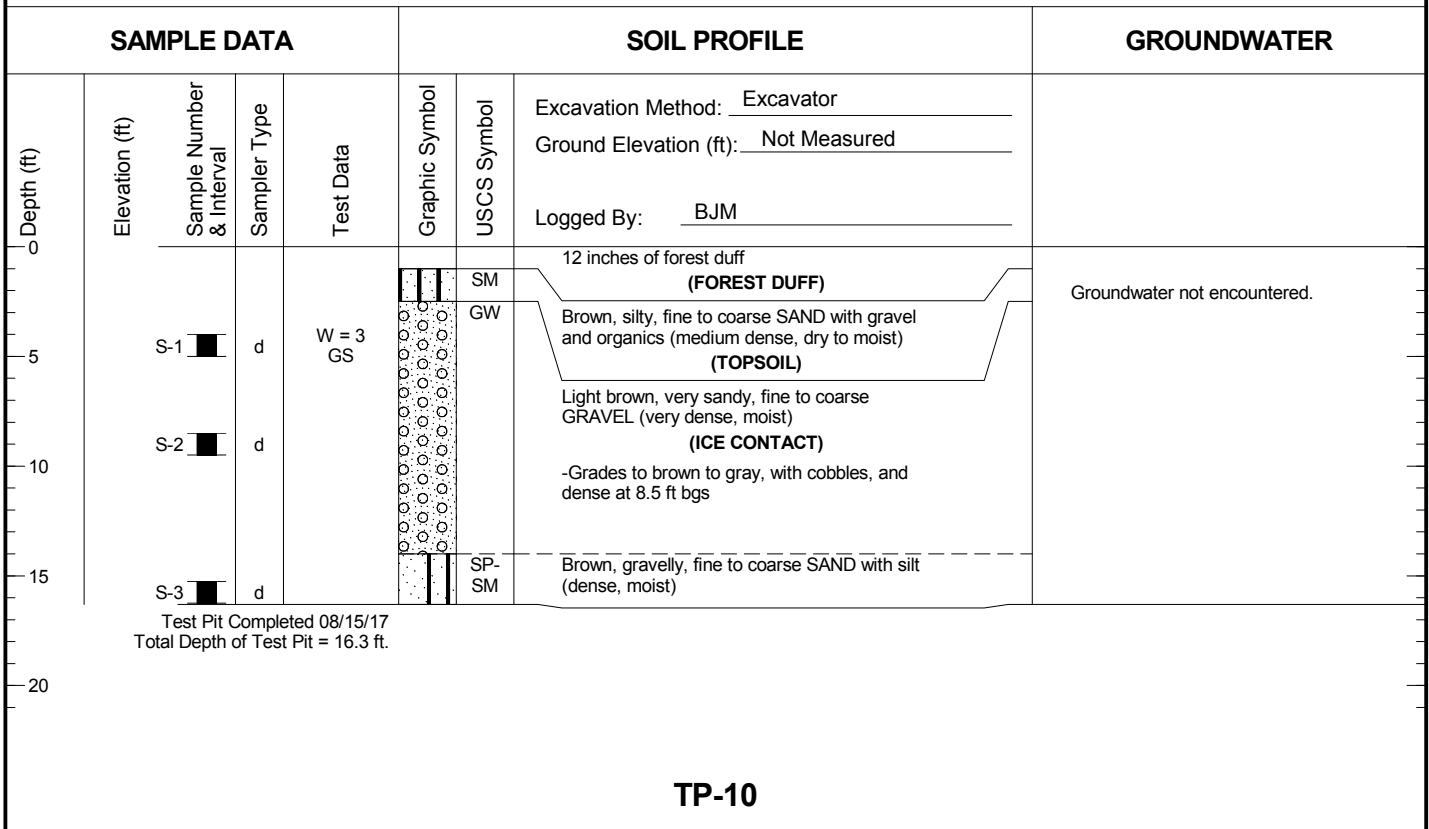


Mason Transit Authority
 Park and Ride Improvements
 Belfair Site
 Belfair, Washington

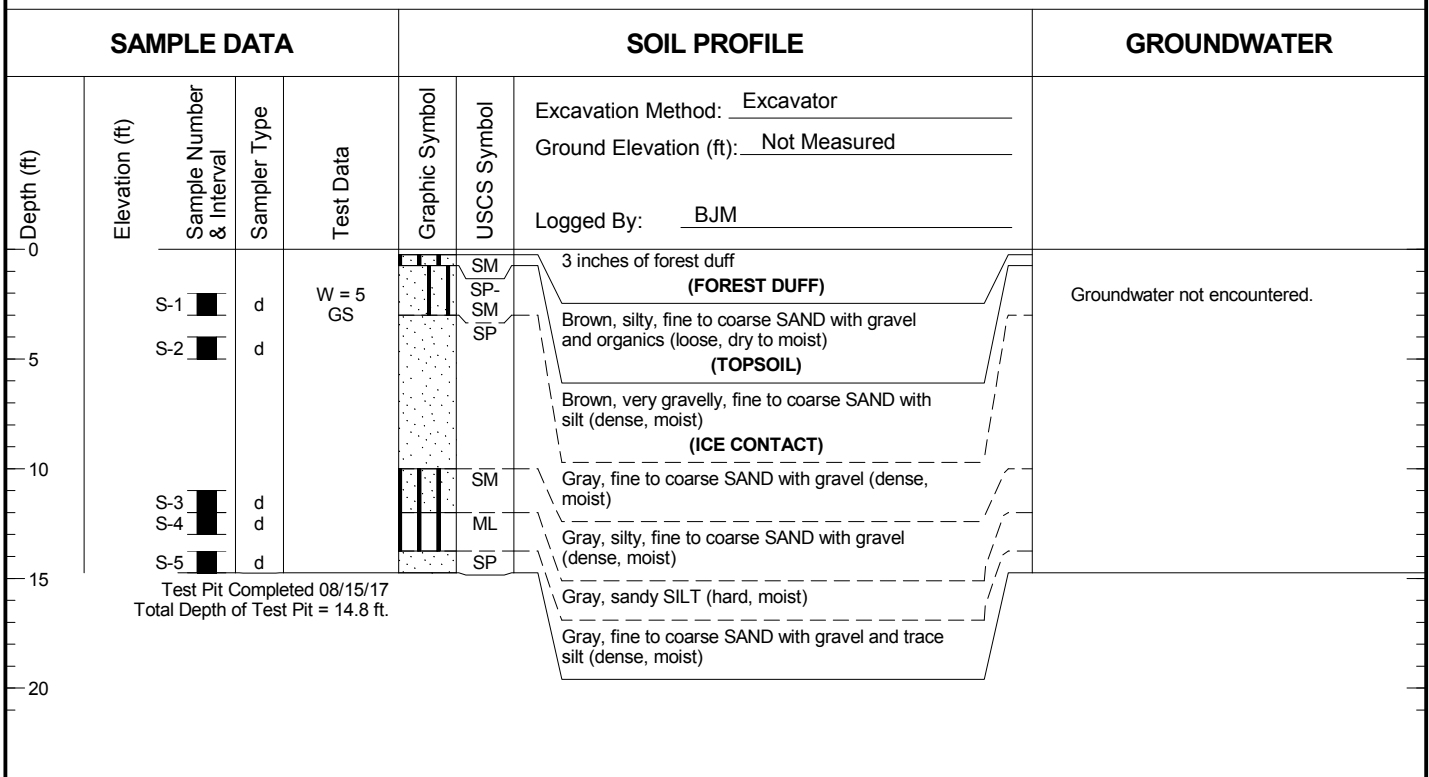
Log of Test Pits

Figure
A-5

TP- 9



TP-10



- Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
 2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
 3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1174015.01 9/15/17 Y:\1174015.01\BELFAIR SITE\1174015.010.GPJ TEST PIT LOG W/ ELEVATION



Mason Transit Authority
 Park and Ride Improvements
 Belfair Site
 Belfair, Washington

Log of Test Pits

Figure
A-6

Laboratory Testing

APPENDIX B LABORATORY TESTING

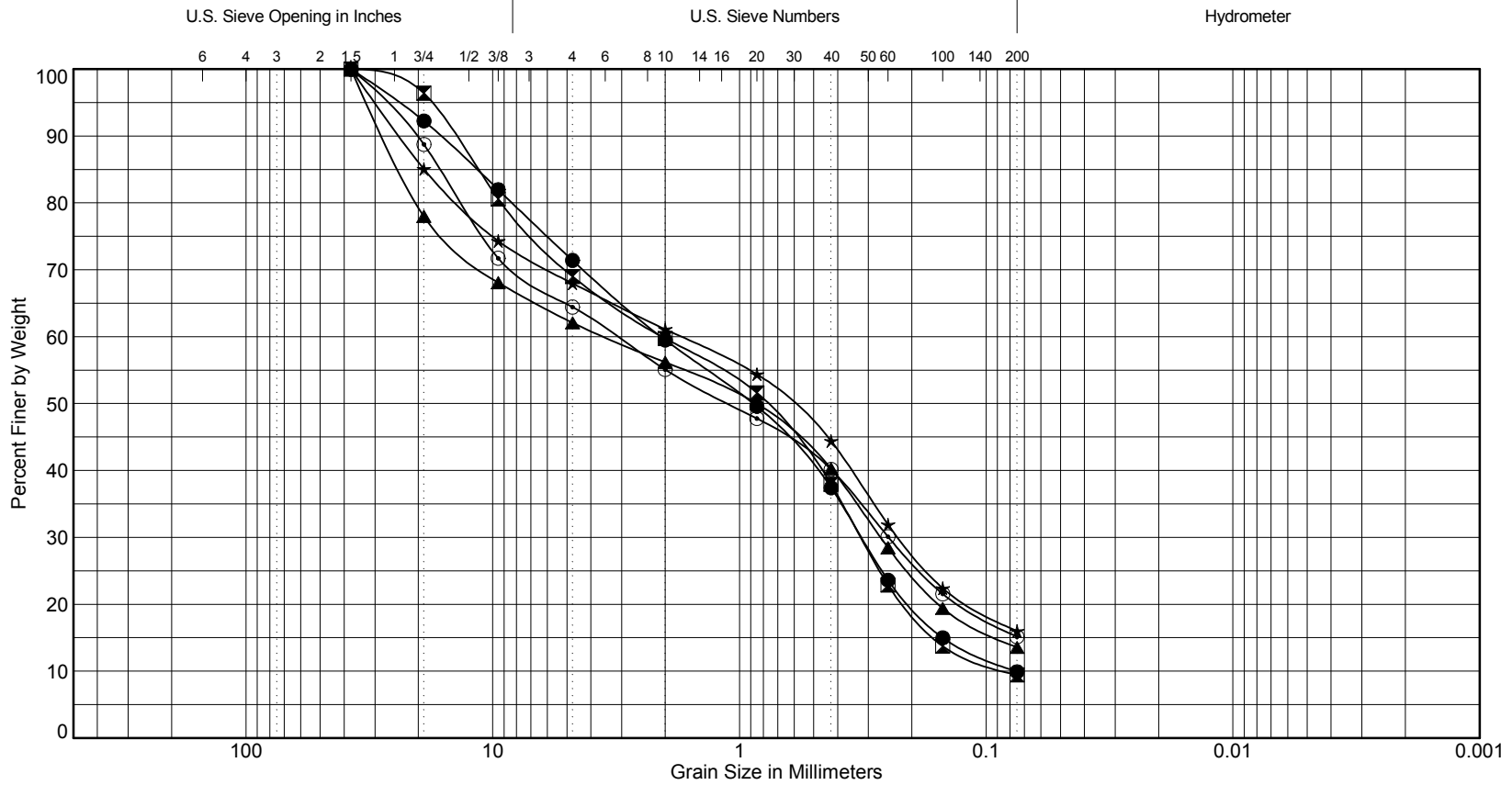
Natural moisture content determinations and grain size analyses were performed on select samples to facilitate soil classification and estimation of infiltration rates. Laboratory testing was performed in general accordance with the ASTM International (ASTM) standard test methods described below. The field log descriptions were checked against the samples and updated where appropriate in general accordance with ASTM standard test method D2487, *Standard Practice for Classification of Soils for Engineering Purposes*.

Natural Moisture Content

In general accordance with ASTM standard test method D2216, natural moisture content determinations were performed on select soil samples. The natural moisture content is shown as W = xx (i.e., percentage of dry weight) at the respective sample depth in the column labeled “Test Data” on the summary exploration logs presented in Appendix A.

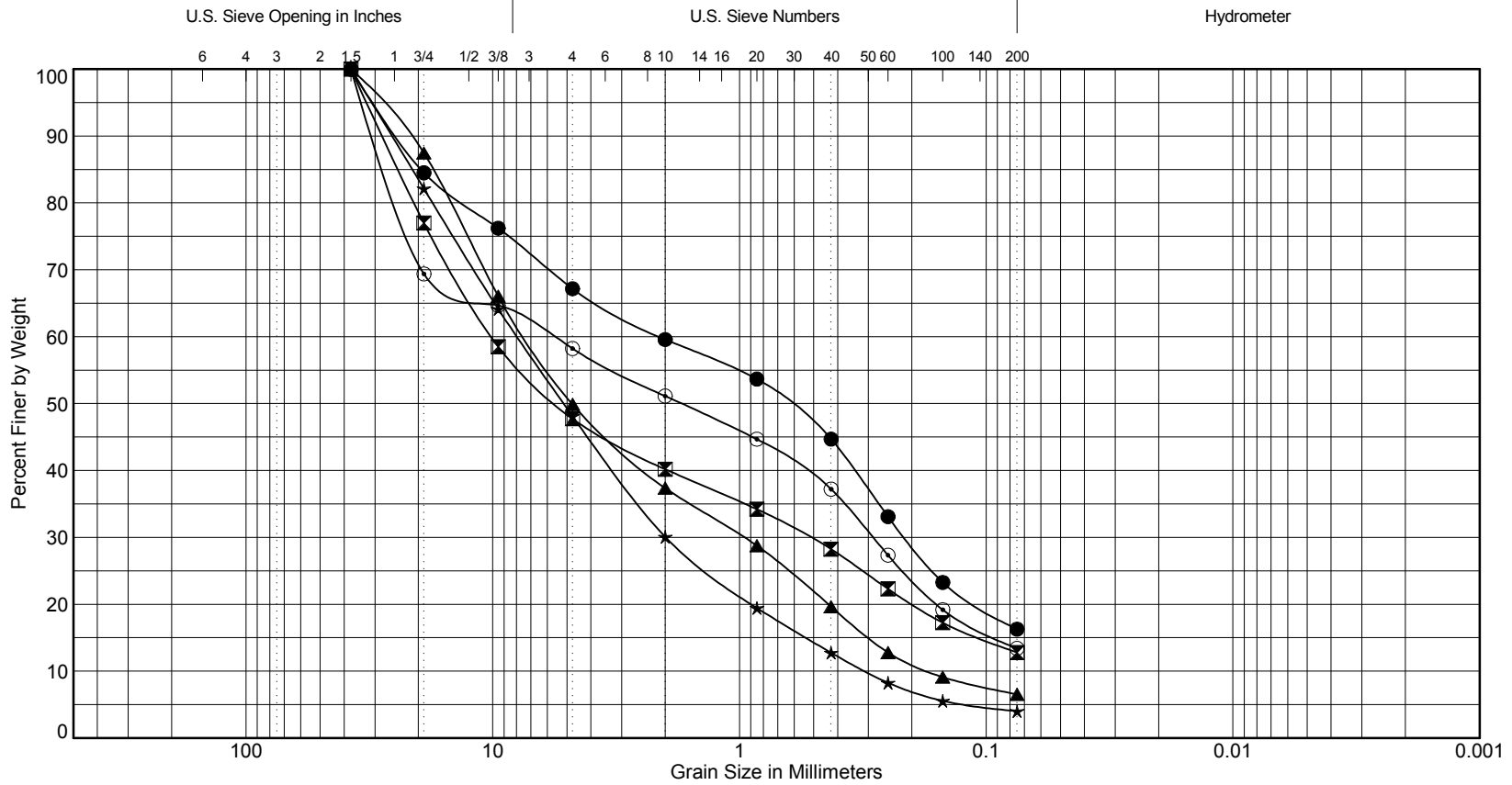
Grain Size Analyses

To provide an indication of the grain size distribution of site soil, grain size analyses were conducted on representative soil samples. Analyses were performed in accordance with ASTM standard test method D422. Samples selected for grain size analyses are designated with a “GS” in the column labeled “Test Data” on the summary exploration logs in Appendix A. The results of the grain size analyses are presented in the form of grain size distribution curves on Figures B-1 and B-2 in this appendix.



Cobbles	Gravel		Sand			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	

Symbol	Exploration Number	Sample Number	Depth (ft)	Natural Moisture (%)	Soil Description	Unified Soil Classification
●	TP- 2	S-1	3.5	4	Gravelly, fine to coarse SAND with silt	SP-SM
⊠	TP- 3	S-1	4.0	3	Very gravelly, fine to coarse SAND with silt	SP-SM
▲	TP- 4	S-2	6.0	5	Very gravelly, fine to coarse SAND with silt	SP-SM
★	TP- 4	S-3	11.0	6	Silty, very gravelly, fine to coarse SAND	SM
⊙	TP- 5	S-1	3.0	6	Silty, very gravelly, fine to coarse SAND	SM



Cobbles	Gravel		Sand			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	

Symbol	Exploration Number	Sample Number	Depth (ft)	Natural Moisture (%)	Soil Description	Unified Soil Classification
●	TP- 5	S-2	7.5	6	Silty, very gravelly, fine to coarse SAND	SM
◩	TP- 6	S-2	6.0	6	Very sandy, fine to coarse GRAVEL with silt	GP-GM
▲	TP- 6	S-4	15.5	4	Very sandy, fine to coarse GRAVEL with silt	GP-GM
★	TP- 9	S-1	4.0	3	Very sandy, fine to coarse GRAVEL	GW
⊙	TP-10	S-1	2.5	5	Very gravelly, fine to coarse SAND with silt	SP-SM

MASON TRANSIT AUTHORITY
Log Yard Road and SR 3 Roundabout Project

APPENDIX B

WSDOT Construction Agreement Conditions

Forest Practices Permit Conditions

WSDOT Special Provisions for Construction Agreement

Construction Agreement Number: **XXXXXX**

These Special Provisions, in no way relieve the responsibility of the AGENCY or their authorized agents, contractors, subcontractor's, and employees (hereinafter called the AGENCY) to meet the requirements of the WSDOT Standard Specifications and Standard Plans, for the work proposed by this agreement (hereinafter called the "Improvements").

Applicable provisions are denoted by a checked box ()

1. **WSDOT REPRESENTATIVE / NOTICE TO PROCEED**

No Improvements provided for herein shall be performed until the AGENCY is authorized by the following WSDOT representative:

Bryan Dias – Materials Engineer (Office: 360-704-3213)
Mark Stevens - Inspector (Cell: 253-221-3186)
Materials Office
5720 Capitol Blvd SE Bldg. 7
Tumwater, WA 98501-5201

2. **PLAN CHANGES**

• **AGENCY CHANGE ORDERS / ADDENDAS**

Changes to any previously approved plans affecting WSDOT owned highway right-of-way or highway right-of-way under WSDOT jurisdiction must be reviewed and approved in writing by WSDOT prior to execution and implication.

• **WSDOT REQUIRED CHANGES OR 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, and/or Project Special Provisions.

3. **EXPIRATION DATE**

Should construction not begin within Eighteen (18) months after the Date of Execution, the Agreement shall be canceled unless a time extension is granted. If this Agreement is canceled, it shall be necessary to repeat the entire application, review, and approval process.

4. **WORKING DAYS**

The project Improvements within the WSDOT owned highway right-of-way shall be physically completed within the below listed working days, unless additional working days are approved in writing by WSDOT:

XX working days from commencement of said Improvements.

Failure by the AGENCY to complete the Improvements within the allotted working days, as determined solely by WSDOT, may result in WSDOT completing the Improvements at the expense of the AGENCY. The AGENCY agrees to reimburse WSDOT's actual direct and related indirect costs and expenses for WSDOT completing the Improvements or other actions deemed appropriate and reasonable by WSDOT.

5. **EMERGENCY REMEDIATIONS**

The AGENCY agrees to immediately implement any emergency remediation(s) needed to restore WSDOT owned facilities and/or WSDOT owned highway right-of-way to a condition and configuration that is safe for public use. Any disruption to anything electrical, including but not limited to traffic signals, illumination, traffic detection systems (e.g. loops, radar, video), and Intelligent Transportation Systems requires immediate remediation.

WSDOT's Construction Representative, and/or Olympic Region Traffic Management Center (TMC) shall be notified immediately if any emergency remediation(s) are required. The Olympic Region TMC is a 24/7 operation that provides a centralized radio communications center for WSDOT and may be reached by phone at: 253-538-3300 and/or 800-260-4214.

If the AGENCY is not able to immediately restore the WSDOT owned facilities and/or WSDOT owned highway right-of-way, WSDOT may perform or contract to perform, the restoration or emergency work at the AGENCY's sole expense. The AGENCY agrees that all costs associated with WSDOT's work, including engineering, completing WSDOT owned facilities and WSDOT highway right-of-way restoration, and contractor claims will be the sole responsibility of the AGENCY. This section shall survive Agreement termination.

6. **PROTECTION OF PROPERTY**

The AGENCY shall assure that all public and private property, including but not limited to, traffic control devices, survey monuments, utilities, stormwater facilities, fences, and mail boxes on or near the project are not damaged, destroyed, or removed. If any such property is disturbed, WSDOT's Construction Representative shall be notified within eight (8) hours. Any public or private property that is damaged, removed, relocated or rendered less functional shall be replaced, repaired, or fully restored to the satisfaction of WSDOT's Construction Representative.

7. **PROGRESS SCHEDULE**

A progress schedule per WSDOT Standard Specifications Section 1-08.3 shall be submitted prior to beginning the Improvements.

8. **DELAY TO WSDOT CONTRACTS**

The AGENCY agrees to schedule and perform the Improvements herein in such a manner as not to delay WSDOT's contractor in the performance of any WSDOT contract in the area. WSDOT shall in no way be held liable for any damage to the AGENCY, by reason of any such work activities by WSDOT, its agents or representatives, or by the exercise of any rights by WSDOT upon any applicable roads, streets, public places, or structures.

9. **PERMITS FROM OTHER AGENCIES**

The AGENCY shall be responsible for obtaining any necessary Federal, State, and Local Permits including, but not limited to Washington State Department of Ecology, Washington State Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the National Environmental Policy Act (NEPA) prior to the beginning of construction.

10. **DOCUMENTS ON SITE**

Copies of this Agreement, protected from the elements at all times during any construction authorized by said Agreement, shall be kept at the project construction site. The Agreement shall be shown upon request to any WSDOT Representative or Law Enforcement Officer. If the Agreement package is not kept and made available at the project construction site, WSDOT may suspend the AGENCY's work activities.

11. **INSPECTION AND ACCEPTANCE**

All Improvements are subject to monitoring and inspection by WSDOT. Upon completion of the Improvements, the AGENCY shall request a final inspection for acceptance and approval by WSDOT.

12. **AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS**

All public entities are required to follow the *Americans with Disabilities Act of 1990* (ADA), regardless of funding sources. Wherever pedestrian facilities are intended to be a part of the transportation facility, federal regulations require that those pedestrian facilities meet ADA standards. All new construction or alteration of existing transportation facilities must be designed and constructed to be accessible to and usable by persons with disabilities per Title II of the ADA (28 CFR Part 35.151) and Section 504 regulations (49 CFR Part 27.7(c)).

Neither cost nor schedule are factors in determining whether the ADA standards can be met, nor are they factors in determining the feasibility of complying with the standard. An alteration project must be planned, designed, and constructed so that the required accessibility improvements occur at the same time as the alteration. The following are not considered Alteration Projects: Spot Pavement Repair, Liquid-Asphalt Sealing, Chip Seal (BST), Crack Sealing, and Lane Restriping that does not alter the usability of the shoulder.

If there is uncertainty as to whether a project meets the definition of an alteration project, the WSDOT Construction Representative and the AGENCY's Representative shall consult with the WSDOT Regional ADA Coordinator. If a situation is encountered where it may not be possible to fully meet the applicable accessibility requirements during alterations of existing facilities, the WSDOT Construction Representative and the AGENCY's Representative shall consult with the WSDOT Regional ADA Coordinator in order to develop a workable solution to meet the accessibility requirements to the Maximum Extent Feasible (MEF).

13. **TRAFFIC CONTROL AND PUBLIC SAFETY**

• **TRAFFIC CONTROL PLANS (TCP's)**

Prior to construction and/or maintenance of this facility, the AGENCY shall submit Traffic Control Plans to WSDOT for review and approval at least ten (10) days in advance of the time that signing and other traffic control devices will be required. These TCP's shall be in compliance with The Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways – Part 6 (Temporary Traffic Control) <https://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part6.pdf> and Washington State modifications thereto. All TCP's shall be site specific, unless allowed otherwise by WSDOT.

• **MODIFICATION OR REVOCATION OF APPROVED TRAFFIC CONTROL PLANS**

WSDOT reserves the right to modify or revoke any Traffic Control Plan at any time due to unexpected emergencies, safety concerns, or other operational situations that may adversely impact the traveling public. All costs and time delays associated with modification or revocation shall be borne by the AGENCY. WSDOT shall in no way be held liable for any delays, costs, or other damages to the AGENCY by reason of any such WSDOT action.

• **PERMITTED HOURS FOR LANE CLOSURES / WSDOT NOTIFICATION**

The working hours within WSDOT owned highway right-of-way or highway right-of-way under WSDOT jurisdiction for this project are restricted per the Approved Traffic Control Plan(s). Any extension of these hours must be requested in writing and approved by WSDOT in writing prior to implementation. Weekend or Holiday work is not permitted without prior written permission from the WSDOT. Five (5) working days written notification shall be given to the WSDOT Representative prior to any lane closure.

• **LIQUIDATED DAMAGES**

The AGENCY agrees to pay the following liquidated damages from the reimbursable account established for this Agreement for failure to open the traveled way as specified:

\$500 liquidated damages per 15 minutes for each 15-minute period (prorated to the nearest 5 minutes) when a lane remains closed beyond the scheduled opening time. The liquidated damages is per each lane that is closed.

• **SUSPENSION OF TRAFFIC CONTROL OPERATIONS**

WSDOT reserves the right to suspend all lane and shoulder closure operations due to unexpected emergencies or impediments to the flow of traffic. All costs associated with this suspension shall be borne by the AGENCY.

• **HAZARD PROTECTION**

All hazards to vehicular, pedestrian, and bicycle traffic shall be marked by warning signing, barricades, and lights.

13. **TRAFFIC CONTROL AND PUBLIC SAFETY (continued)**

• **STORAGE OF EQUIPMENT AND MATERIALS**

All lanes shall be open and the shoulders shall be clear of construction equipment and materials during non-working hours. The Work Zone Clear Zone (WZCZ) applies during working and non-working hours. The WZCZ applies only to temporary roadside objects introduced by the AGENCY's work operations and does not apply to pre-existing conditions. Those work operations that are actively in progress shall be in accordance with the adopted and approved Traffic Control Plan(s) and other contract or construction agreement requirements.

During nonworking hours, equipment or materials shall not be within the WZCZ unless they are protected by guardrail or barrier. The use of temporary concrete barrier shall be permitted only if WSDOT approves the installation and location. During actual hours of work, unless protected as described above, only materials absolutely necessary to construction shall be within the WZCZ and only construction vehicles absolutely necessary to construction shall be allowed within the WZCZ or allowed to stop or park on the shoulder of the roadway.

• **NON-ESSENTIAL VEHICLES**

Non-essential vehicles and employees private vehicles shall not be allowed to park within the WZCZ at any time unless protected as described above.

Deviation from the above requirements shall not occur unless the AGENCY has requested the deviation in writing, and WSDOT has provided written approval.

14. **TRAFFIC CONTROL SUPERVISOR**

The AGENCY shall employ an individual or individuals to perform the duties of Full-Time Traffic Control Supervisor (TCS), certified by WSDOT. The TCS shall be responsible for safe implementation of Approved Traffic Control Plans. The TCS shall be present on the project whenever flagging, spotting, or other traffic control is being utilized. The TCS shall be responsible for having a current set of approved Traffic Control Plans, inspecting traffic control devices and nighttime lighting for proper location, installation, message, cleanliness, and effect on the traveling public. Traffic control devices shall be inspected at least once per hour during working hours. The TCS shall correct, or arrange to have corrected, any deficiencies noted during these inspections. The AGENCY shall maintain 24-hour telephone numbers at which the TCS can be contacted and be available on the job site within one (1) hour of notification from the WSDOT Construction Representative if outside of the specified working hours.

15. **WORKER VISIBILITY**

• **FLAGGER APPAREL**

Traffic Control Supervisors, Flaggers, Spotters, and others performing Traffic Control Labor of any kind shall comply with the following: (1). During daylight hours with clear visibility, workers shall wear a high-visibility ANSI/ISEA 107-2015 Class 2 or 3 vest or jacket, and hardhat meeting the high-visibility headwear requirements of WAC 296-155-305; and (2). During hours of darkness (½ hour before sunset to ½ hour after sunrise) or other low visibility conditions (snow, rain, fog, etc.), workers shall wear a high-visibility ANSI/ISEA 107-2015 Class 2 or 3 vest or jacket, high-visibility lower garment meeting ANSI/ISEA 107-2015 Class E, and headwear meeting the high-visibility headwear requirements of WAC 296-155-305.

• **APPAREL - OTHER CONTRACTOR PERSONNEL:**

The AGENCY shall require all other personnel in WSDOT owned highway right-of-way or highway right-of-way under WSDOT jurisdiction (including Service Providers, Subcontractors, and lower tier Subcontractors) that are on foot in the work zone and are exposed to vehicle traffic or construction equipment to wear the high-visibility apparel meeting Performance Class 2 or 3 requirements of the ANSI/ISEA 107-2015 publication titled "American National Standard for High Visibility Safety Apparel and Headwear".

16. **MATERIALS AND QUALITY ASSURANCE / QUALITY CONTROL (QA/QC)**

• **MATERIALS AND WORKMANSHIP**

All materials and workmanship shall conform to the WSDOT Standard Specifications for Road, Bridge and Municipal Construction, current edition, and amendments thereto, and shall be subject to inspection by WSDOT.

• **REQUEST FOR APPROVAL of MATERIALS (RAM)**

The RAM shall be prepared by the AGENCY in accordance with the instructions on Form 350-071 and submitted to the WSDOT Construction Representative for approval before the material is incorporated into the Improvements. All material, including proposed Aggregate Sources, shall be listed on the RAM Form. Approval of the material does not constitute acceptance of the material for incorporation into the Improvements. Additional acceptance actions as noted on the RAM need to be completed prior to the materials being incorporated into the Improvements. When requesting approval of an item that requires fabrication, both the fabricator and the manufacturer of the base material shall be identified on the RAM. The current form 350-071 may be accessed online at: www.wsdot.wa.gov/Business/MaterialsLab/RAM.htm.

• **QUALIFIED PRODUCTS LIST (QPL)**

The most current QPL list available at the time the product is proposed for use shall be used. The QPL submittal shall be prepared by the AGENCY in accordance with the instructions in the QPL and submitted to the WSDOT Construction Representative prior to use. The QPL identifies the approved products, the applicable specification section, and the basis for acceptance at the project level. The acceptance and use of these products is based upon additional job sampling and/or documentation. All additional acceptance actions need to be completed prior to the material being incorporated into the Improvements. Qualified products not conforming to the specifications, not fulfilling the acceptance requirements, or improperly handled or installed, shall be replaced at the AGENCY's expense. If there is a conflict between the QPL and the contract, the provisions of the contract shall take precedence over the QPL. The current QPL may be accessed online at www.wsdot.wa.gov/biz/mats/gpl/gpl.cfm.

16. MATERIALS AND QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) (continued)

• **AGGREGATE SOURCE APPROVAL (ASA)**

All aggregates proposed for use on the project shall be from pre-approved WSDOT sources. Pre-approved sources can be found on WSDOT's ASA database which contains results of WSDOT preliminary testing of aggregate sources. The ASA database may be accessed online at: www.wsdot.wa.gov/biz/mats/ASA/ASASearch.cfm. This database is used by WSDOT to indicate the approval status of these aggregate sources for applications that require preliminary testing as defined in the contract. The ASA report identifies the currently approved applications for each aggregate source listed. The acceptance and use of these aggregates is contingent upon additional job sampling and/or documentation. Aggregates approved for applications on the ASA report not conforming to the specifications, not fulfilling the acceptance requirements, or improperly handled or installed, shall be replaced at the AGENCY's expense.

• **MATERIAL TESTING / REPORTING OF RESULTS**

All material testing is to be performed by the AGENCY or an Independent Certified Testing Laboratory of their choice. Copies of all test results shall be submitted to the WSDOT Construction Representative prior to beginning the next phase of construction. WSDOT reserves the right to verify the test results or to perform the testing.

• **FABRICATION INSPECTION**

The AGENCY shall be responsible for scheduling inspection of fabricated items such as signal & illumination poles, anchor bolts, concrete j-boxes, ITS vaults, catch basins, manholes and risers, permanent signing etc. Once an item has been inspected and approved by WSDOT, the WSDOT Fabrication Inspector will stamp it "WSDOT Approved for Shipment", as this stamp becomes part of the permanent documentation record.

More information about which items require inspection and approval may be obtained at the State Materials Laboratory Homepage, which may be accessed online at: www.wsdot.wa.gov/Business/MaterialsLab/default.htm.

• **HOT MIX ASPHALT (HMA) DESIGN**

Prior to any paving operation, the AGENCY shall submit WSDOT approved HMA Mix Design(s) from WSDOT's Qualified Products List (QPL) for use on this project.

• **PAVING OPERATIONS**

No paving operations will be allowed when it is raining or snowing. Written permission from the WSDOT Construction Representative shall be required if paving operations begin between October 1st of any year through March 31st of the following year. Surface temperature and other paving limitations as per WSDOT Standard Specifications shall be enforced.

• **PAVEMENT OPEN CUTS**

Open cuts for utility crossings will generally not be allowed. If an open cut is requested by the AGENCY and approved by the WSDOT, the AGENCY shall repair the open cut per WSDOT's pavement restoration detail requirements.

• **MATERIAL TRANSFERING DEVICE / VEHICLE**

Direct transfer of Hot Mix Asphalt (HMA) from the hauling equipment to the paving machine will not be allowed in the top 0.30 feet of the pavement section of HMA used in traffic lanes with a depth of 0.08 feet or greater. A Material Transfer Device or Vehicle (MTD/V) shall be used to deliver the HMA from the hauling equipment to the paving machine. HMA for pre-leveling, pavement repair, or HMA placed in irregularly shaped and minor areas such as road approaches, tapers, and turn lanes are excluded from this requirement. At the AGENCY's request, the WSDOT Construction Representative may approve paving without an MTD/V. The MTD/V shall mix the HMA after delivery by the hauling equipment and prior to lay down by the paving machine. Mixing of the HMA shall be sufficient to obtain a uniform temperature throughout the mixture. If a windrow elevator is used, the length of the windrow may be limited in urban areas or through intersections, at the discretion of the WSDOT Construction Representative.

• **ROLLERS**

The type of rollers to be used and their relative position in the compaction sequence shall generally be at the AGENCY's discretion, provided the specified densities are attained. An exception shall be that pneumatic tired rollers shall be used for compaction of the wearing course beginning October 1st of any year through March 31st of the following year. Coverage with a steel wheel roller may precede pneumatic tired rolling. Operation of the roller shall be in accordance with the manufacturer's recommendations. The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, or displacement of the mixture, or other undesirable results shall not be used.

• **QUALIFICATION of CONCRETE SUPPLIERS**

Concrete Batch Plant Prequalification requires a certification by the National Ready Mix Concrete Association (NRMCA). A copy of that Certificate shall be submitted to the WSDOT Construction Representative prior to placement of any cement concrete.

• **CONCRETE MIX DESIGN**

Prior to placement of any cement concrete, the AGENCY shall submit WSDOT approved mix design(s) for use on this project to the WSDOT Construction Representative.

• **DRAINAGE STRUCTURES**

Only structures stamped "Approved" by the State's Materials and Fabrication Inspection Office shall be used on this project.

17. UNSUITABLE OR HAZARDOUS MATERIALS

If determined necessary by WSDOT, unsuitable or hazardous material encountered during any excavation shall be removed and replaced to the satisfaction of WSDOT at the AGENCY's expense. The replacement material shall be free-draining and granular, or other materials as determined by WSDOT's Construction Representative in accordance with the WSDOT Standard Specifications.

18. EROSION CONTROL / DRAINAGE

- **BEST MANAGEMENT PRACTICES (BMP'S)**

During construction of this project, the AGENCY shall comply with all provisions of the WSDOT Highway Runoff Manual (HRM) or equivalent WSDOT approved plan and implement BMP's as detailed in the HRM to mitigate erosion.

- **WATER DISCHARGES ON THE PROJECT**

All discharges to WSDOT owned highway right-of-way or highway right-of-way under WSDOT jurisdiction, if allowed on this project, 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).

19. INTERFERENCE TO STATE HIGHWAY DRAINAGE

If the Improvements done under this Agreement interferes in any way with the drainage of the state highway, the AGENCY shall wholly and at its own expense make such provision as WSDOT may direct to address said drainage.

20. DRAINAGE AND STRUCTURES

- **PIPE END TREATMENT**

All culvert pipes shall have beveled end sections and quarry spalls shall be placed around end of pipes in the bottom of the ditch, and on the side of the slopes.

- **UTILITY COVER ELEVATION**

All manholes, valve covers, and like appurtenances shall be constructed at such an elevation to conform to the shoulder slope from the edge of pavement or as directed by the WSDOT Construction Representative.

- **DRAINAGE STRUCTURES**

Only structures stamped "Approved" by WSDOT's Fabrication Inspection Office shall be used on this project.

21. UTILITIES AND SIMILAR FACILITIES

The AGENCY shall be responsible to obtain all necessary Utility Permits, Utility Franchises, and modifications thereto. WSDOT's approval and execution of this Agreement is separate from any other WSDOT and/or Local Agency approval(s) for utility work within WSDOT owned highway right-of-way, including new installations, removals, and relocations.

22. UTILITY LOCATES

The AGENCY shall call the One-Number Locator Service for field location of Utilities prior to performing any Improvements that may damage Utilities and similar facilities. If no locator service is available for the area, notice shall be provided individually to those owners of utilities known to, or suspected of, having underground facilities within the area of the proposed Improvements.

23. LANDSCAPING ON WSDOT RIGHT-OF-WAY

- **PLANTINGS**

If the AGENCY desires to plant and/or cultivate any shrubs, trees, hedges, or other domestic or native ornamental growth on WSDOT owned highway right-of-way that is more extensive than regular WSDOT vegetation, the AGENCY shall obtain a Roadside Vegetation Permit (DOT Form 220-018) from WSDOT for the maintenance of the plantings.

- **IRRIGATION SYSTEMS**

If the AGENCY desires to install an irrigation system, the AGENCY may be required to obtain additional approval. The AGENCY shall be responsible for water and electrical costs.

24. DISTURBANCE OF EXISTING RIGHT-OF-WAY VEGETATION

Unless otherwise authorized by the WSDOT Construction Representative in writing prior to the start of any Improvements, this Agreement does not authorize the AGENCY, 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 WSDOT owned highway right-of-way under WSDOT jurisdiction. Should the AGENCY anticipate that its Improvements will alter the appearance of WSDOT owned highway right-of-way vegetation or landscaping, the AGENCY shall notify the WSDOT Construction Representative to obtain WSDOT's prior written approval of the AGENCY's proposed Improvements.

If WSDOT allows the AGENCY 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 appearance or functionality will not be altered or damaged. Should the AGENCY damage or alter the appearance of WSDOT owned highway right-of-way vegetation or landscaping without WSDOT's prior written approval, the AGENCY is subject to penalties provided for in RCW's 47.40.070, 47.40.080, and 4.24.630, as applicable.

25. RIGHT-OF-WAY RESTORATION

Upon completion of all Improvements, the AGENCY shall immediately remove all rubbish and debris from WSDOT owned highway right-of-way, leaving it in a neat, presentable, and safe condition to WSDOT's sole satisfaction. All drainage systems must be restored, cleared of obstructions, and fully operational before the Improvements will be accepted by WSDOT.

26. SURVEY MONUMENTS

The AGENCY shall not disturb, remove, or destroy any existing survey monument before obtaining a permit from the Washington State Department of Natural Resources (DNR). Resetting survey monuments shall be done by or under the direct supervision of a registered Professional Engineer or Land Surveyor, in accordance with Chapter 332-120 WAC. A listing of Survey Monuments can be found at WSDOT's Geographic Services Office Website, which may be accessed online at: <http://www.wsdot.wa.gov/monument/searchBroad.aspx>.

27. ARCHAEOLOGICAL / HISTORICAL FINDINGS

If any archaeological or historical resources are revealed by or in the vicinity of the Improvements, the AGENCY shall immediately stop work on the Improvements, notify the WSDOT Construction Representative, retain a qualified Archaeologist who shall evaluate the site, and make recommendations to the WSDOT Construction Representative regarding the continuance of the Improvements.

28. SEVERANCE AND SALE OF TIMBER AND OTHER PERSONALTY — REMOVAL OF NON-MARKETABLE MATERIALS

This Agreement is subject to RCW 47.12.140, and amendments thereto. This Agreement does not authorize the AGENCY any right to cut or remove any trees or timber located on WSDOT right-of-way or upon WSDOT owned highway right-of-way under WSDOT jurisdiction without prior written approval from WSDOT.

29. ILLUMINATION CONSTRUCTION / MODIFICATION

• **CONSTRUCTION**

The AGENCY shall assure that the construction and/or modification of all illumination installed within WSDOT owned highway right-of-way or highway right-of-way under WSDOT jurisdiction meets all requirements of WSDOT.

• **ILLUMINATION DURING CONSTRUCTION**

Pre-existing illumination shall be maintained and functional at all times during construction until the new illumination is operational.

• **ILLUMINATION INSPECTION**

The AGENCY shall contact the WSDOT Construction Representative at least three (3) working days in advance of any inspection.

• **SERVICE AGREEMENTS AND BILLING**

WSDOT shall inspect and approve all new or modified service installations. Any new service shall be installed and made functional at the AGENCY's expense, including paying the monthly billing for these services. Any modifications made to an existing service shall be at the AGENCY's expense, including paying the monthly billing for these services during the time the modifications are being made. After completion of the Improvements by the AGENCY, and after acceptance and approval of the Improvements by WSDOT, the AGENCY shall then contact the applicable utility provider to begin the process of transferring the monthly billings for the service to WSDOT.

30. TRAFFIC SIGNAL CONSTRUCTION / MODIFICATION

• **CONSTRUCTION / MODIFICATION**

The AGENCY shall assure that the construction and/or modification of traffic signals and illumination on signal poles installed within WSDOT owned highway right-of-way meets all requirements of WSDOT.

• **TRAFFIC SIGNAL STANDARDS – APPROVAL**

Traffic signal standards shall be furnished and installed in accordance with the methods and materials noted in the applicable Standard Plans and/or approved contract plans. If the proposed signal standards are not on WSDOT's pre-approved list, which may be accessed online at: www.wsdot.wa.gov/bridge/structures/light-signal-standards, Signal pole shop drawings (electronically, or three (3) sets of copies) shall be submitted to the WSDOT Construction Representative.

• **TRAFFIC SIGNAL ILLUMINATION DURING CONSTRUCTION**

Pre-existing traffic signal illumination shall be maintained and functional at all times during construction until the new traffic signal illumination is operational.

• **TEMPORARY VIDEO DETECTION SYSTEM**

If any traffic detection loop is scheduled to be disabled, a temporary video detection system shall be completely installed and made operational prior to any associated induction loop being disabled.

• **TRAFFIC DETECTION LOOPS**

The AGENCY shall notify the WSDOT Construction Representative a minimum of five (5) working days in advance of any pavement removal, saw cutting, and/or grinding in areas with existing loops. All new traffic detection loops shall be installed after grinding or prior to paving the final lift of asphalt unless otherwise approved in writing by WSDOT's Construction Representative.

If the WSDOT Construction Representative suspects that damage to any traffic detection loop, not identified in the Plans as being replaced, may have resulted from AGENCY's operations or is not operating adequately, the WSDOT Construction Representative may order the AGENCY to perform the field tests specified in WSDOT Standard Specifications 8-20.3(14)D "Test for Induction Loops and Lead-In Cable". The test results shall be recorded and submitted to the WSDOT Construction Representative. Loops that fail any of these tests shall be replaced.

Traffic detection loops that fail the tests, as described above, and are replaced shall be installed in accordance with current WSDOT design standards and Standard Plans, as determined by the WSDOT Construction Representative. If traffic detection loops that fail the tests, as described above, are not replaced and operational within forty eight (48) hours, the AGENCY shall install and maintain interim video detection until the replacement loops are operational. The type of interim video detection furnished shall be approved by the WSDOT Construction Representative prior to installation.

30. **TRAFFIC SIGNAL CONSTRUCTION / MODIFICATION (continued)**

• **TRAFFIC SIGNAL HEADS**

Unless approved in writing by the WSDOT Construction Representative, signal heads shall not be installed at any intersection until all other signal equipment is installed and the controller is in place, inspected, and ready for operation at that intersection, except that the signal heads may be mounted if the faces are covered with Signal Head Covering Material.

• **SIGNAL HEAD COVERING**

The signal head covering material shall be manufactured from a durable fabric material, black in color with a mesh front, and designed to fit the signal head configuration properly. The covers shall have an attachment method that will hold the cover securely to the signal in heavy wind. The covers shall be provided with a drain to expel any accumulated water.

• **TRAFFIC SIGNAL PRE-TURN-ON COORDINATION MEETING AND TESTING**

Prior to a traffic signal turn-on event, the AGENCY shall conduct a pre turn-on coordination meeting with the following WSDOT personnel as applicable: the WSDOT Construction Representative, Electrical Inspector, Signal Operations Engineer, and Signal Maintenance Superintendent. The AGENCY shall provide a minimum of five (5) days written notice of the proposed pre turn-on coordination meeting date and time. Unless approved otherwise by the WSDOT Construction Representative, the permitted hours for pre-turn-on coordination and testing shall be per the approved traffic control plan(s) for the specific operation.

• **TRAFFIC SIGNAL TURN-ON AND/OR SWITCHOVER OPERATIONS**

The AGENCY shall contact the WSDOT Construction Representative at least five (5) working days prior to scheduling a signal turn-on. Prior to scheduling a turn-on date, the AGENCY shall provide verification to the WSDOT Construction Representative that all required testing has been satisfactorily completed. The traffic signal turn-on procedure shall not begin until all required channelization, pavement markings, illumination, signs, and sign lights are substantially complete and operational unless otherwise allowed by the WSDOT Construction Representative. If the AGENCY is directed to turn off the traffic signal, the AGENCY shall schedule a new turn-on date with the WSDOT Construction Representative.

• **UNIFORMED POLICE OFFICER (UPO)**

A UPO shall be present during the entire traffic signal turn-on operation. The AGENCY agrees to pay all UPO related costs.

• **PERMITTED HOURS FOR SIGNAL TURN-ON AND/OR SWITCHOVER OPERATIONS**

Unless approved by the WSDOT Construction Representative, the permitted hours for traffic signal turn-on or switchover shall be per the approved traffic control plan(s) for the specific operation. Signal switchover and turn-on operations are permitted only on Tuesday, Wednesday, or Thursday – except in the case of an emergency. No switchover or turn-on operations will be permitted on Monday, Friday, weekends, holidays, or the day preceding a holiday.

• **NEW SIGNAL AHEAD / SIGNAL REVISION WARNING SIGNING**

“NEW SIGNAL AHEAD” (W20-902) or “SIGNAL REVISION AHEAD” (W20-903) signs shall be installed in advance of all affected directions of travel on the project when a new traffic signal system is turned-on and made operational or when modifications to an existing signal are complete and operational. The location of the signs shall be per Section 2C.05 of the MUTCD, or as directed by the WSDOT Construction Representative. These signs are 48” X 48” black letters on orange background, and shall be post mounted. The bottom of the sign shall be mounted seven (7) feet above the pavement elevation. Each sign shall have three (3) 12” by 12” fluorescent orange flags or flag signs mounted on both sides and on top of the sign. The flag signs shall be made of aluminum, durable cloth, or plastic. The signs and flags shall be mounted by the AGENCY and stay erect for six (6) to eight (8) weeks or as directed by the WSDOT Construction Representative.

• **SERVICE AGREEMENTS AND BILLING**

WSDOT shall inspect and approve all new or modified service installations. Any new service shall be installed and made functional at the AGENCY’s expense, including paying the monthly billing for these services. Any modifications made to an existing service shall be at the AGENCY’s expense, including paying the monthly billing for these services during the time the modifications are being made. After completion of the Improvements by the AGENCY, and after acceptance and approval of the Improvements by WSDOT, the AGENCY shall then contact the applicable utility provider to begin the process of transferring the monthly billings for the service to WSDOT. The AGENCY shall contact the WSDOT Construction Representative at least three (3) working days in advance of any inspection.

31. **INTELLIGENT TRANSPORTATION SYSTEMS (ITS)**

The AGENCY shall install all ITS per the Contract Plans, WSDOT Standard Plans, MUTCD, or as directed by the WSDOT Construction Representative.

32. **SIGN INSTALLATION**

The AGENCY shall install all Regulatory, Warning, Guide, and Informational Signs per the Contract Plans, WSDOT Standard Plans, MUTCD, or as directed by the WSDOT Construction Representative.

33. **GENERAL OWNERSHIP AND MAINTENANCE RESPONSIBILITIES**

Unless agreed to otherwise, WSDOT shall have ownership and maintenance responsibilities for the Improvements installed within WSDOT owned highway right-of-way or highway right-of-way under WSDOT jurisdiction. For improvements installed on a state highway within an incorporated city or town, ownership and maintenance responsibility shall be per the City Streets as State Highways Maintenance Guidelines, which may be accessed online at:

www.wsdot.wa.gov/NR/rdonlyres/655B7CF4-4F80-489D-B77E-7E0030D69C6A/0/2013AmendmentCityStreetsGuideline.pdf

and the City Streets as Part of State Highways Guidelines which may be accessed online at:

www.wsdot.wa.gov/NR/rdonlyres/56224677-B5BE-41F4-96C1-01BC88B052C8/0/CityStreets.pdf.

- 34. TRAFFIC REVISION WARNING SIGNING**
When the permanent channelization of the highway is changed, "TRAFFIC REVISION AHEAD" (W20-901) warning signs shall be installed in advance of all affected directions of travel of the Project. The location of the signs shall be per Section 2C.05 of the MUTCD, or as directed by the WSDOT Construction Representative. These signs are 48" X 48" black letters on orange background, and shall be post mounted. The bottom of the sign shall be mounted seven (7) feet above the pavement elevation.
- 35. REMOVAL OF PAVEMENT MARKINGS**
Pavement markings to be removed shall be obliterated until blemishes caused by the pavement marking removal conform to the coloration of the adjacent pavement. Grinding to remove painted markings is only allowed prior to application of a Bituminous Surface Treatment (BST). Grinding to remove pavement markings from hot mix asphalt and cement concrete pavements is allowed to a depth just above the pavement surface, then water blasting shall be required to remove the remaining markings. If in the opinion of the WSDOT Construction Representative the pavement is materially damaged by pavement marking removal, such damage shall be repaired by the AGENCY in accordance with Section 1-07.13(1). Sand or other material deposited on the pavement as a result of removing lines and markings shall be removed as Improvements progress to avoid hazardous conditions. Accumulation of sand or other material which might interfere with drainage will not be permitted.
- 36. APPLICATION OF CHANNELIZATION PAVEMENT MARKINGS**
Two applications of paint shall be required for all paint stripe markings as per the WSDOT Standard Specifications. Pavement markings shall also be applied per the WSDOT Standard Specifications.
- 37. NON PAYMENT OF REIMBURSABLE ACCOUNT**
The AGENCY agrees to make payment for the Improvements to be done by WSDOT within thirty (30) days from receipt of billing from WSDOT. Payment not made within thirty (30) days after receipt of billings shall bear interest at the rate of one (1) percent per month or fraction thereof until paid pursuant to RCW 43.17.240.
- 38. ADVERTISING SIGNS**
Advertising signs are prohibited on WSDOT state highway right-of-way. Any advertising adjacent to WSDOT state highway right-of-way must be in compliance with the Scenic Vistas Act of 1971, Chapter 47.42 RCW and Chapter 468-66 WAC. Failure to abide by the Scenic Vistas Act of 1971 may be cause for WSDOT to suspend the AGENCY's work activities.

CONDITIONS

1. ARCHAEOLOGICAL RESOURCES

Archaeological or historical resources, such as ruins, sites, buildings, artifacts, fossils, or other objects of antiquity that may have significance from an historical or scientific standpoint, which may be encountered by the developer/contractor, shall not be further disturbed. If the developer/contractor encounters any such artifacts, he/she shall immediately stop work and notify Mason County and the Washington State Department of Archaeology and Historic Preservation. Failure to do so may result in civil penalties.

2. SLASH ABATEMENT

This Forest Practice Application indicates that forest debris resulting from the proposed logging operation may create an extreme fire hazard under RCW 76.04.600 and WAC 332-24-650. An extreme fire hazard could be created if one or more of the conditions found in WAC 332-24-650 is located within 100 feet of the running surface of a public road; or is within 500 of an existing structure and/or designated public use area, which is not owned by the owner of the fire hazard area.

The land owner is fully liable in the event of fire, if he or she fails to appropriately abate the hazard. Extreme fire hazards shall be abated by removing the forest debris, or by other means approved by the Washington State Department of Natural Resources (DNR).

3. HOURS OF OPERATION

Noise associated with this application shall not exceed what is allowed under Mason County Code 9.36. Operations shall start no earlier than 7:00 AM and shall end before 8:00 PM on a daily basis.

4. STORM WATER & EROSION CONTROL

Escape of silty water or mud from this property shall be considered a violation of County and State storm water management regulations and could subject the applicant(s) to civil fines or penalties. Work shall conform with the requirements of October 2018 Drainage Report/Stormwater and Erosion Control Plan prepared by SCJ Alliance.

5. ACCESS

Applicant is responsible for obtaining any necessary permits for access on to SR 3 from the Washington State Department of Transportation.