December 29, 2013

TO: Derek Case  
MS 47354

THRU: Julie Meredith/Tom Horkan  
NB 82-99

FROM: Dave Becher  
(425) 576-7045

SUBJECT: Contract 008066  
SR 520, Floating Bridge and Landings Project  
Federal Aid No. BR-0520(047)  
Change Order No. 122 – PPDB Revisions

Attached for further processing and execution by Headquarters Construction is Change Order No. 122 – PPDB Revisions.

Description of the Change:
This change is being processed as an Owner Initiated Change (OIC). This OIC settles and closes six outstanding issues with the Design-Build (KGM). Note, one of these issues is a Design-Build Initiated Change (DBIC); however, it is minor in nature and is being included as part of this overall OIC. These six issues are described below:

1. PCO 081 – DBIC Eliminate 4 Draft Boards  
2. PCO 083 – Eliminate Use of Plastic Chairs  
3. PCO 126 – Crack Mapping & Repairs for CTC Pontoons  
4. PCO 166 – OIC CTC Shutdown (due to rebar congestion issues)  
5. PCO 197 – OIC Changes to Rebar in Pontoons @ CTC (Types 2 and 5 Keel Slab Bar Redesign)  
6. PCO 275 – Cure Drain Waterproofing Protection

PCO 081 – KGM proposed to reduce the number of draft boards required on the Pontoons Provided by the Design-Build (PPDB) from eight to four. They also proposed allowing the option to “paint” the draft boards on the PPDB.

This change order modifies Section 2.12.5.11.1 Pontoon Handling as follows.

Delete the following sentence:

“Draft boards shall be installed on each side of each corner of each Pontoon for a total of eight draft boards per Pontoon.”
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And replace with:

"Draft boards shall be installed or painted on one side of each corner of each Pontoon for a total of four draft boards per Pontoon."

PCO 083 – The RFP as written allowed the Design-Builder to use plastic chairs to support steel reinforcing bar in the Supplemental Stability Pontoons (SSPs). WSDOT determined that use of the plastic chairs in the exterior walls and keel slabs presented a potential long term maintenance problem for the pontoons and initiated an OIC to replace the plastic chairs with concrete mortar blocks.

This change adds a new section to Chapter 12 after Section 2.12.5.10.2.3.

Insert the following language:

"2.12.5.10.2.4 Steel Reinforcing Bar Supports  
Steel reinforcing bar supports used in the exterior walls and keel slabs of Supplemental Stability Pontoons shall be mortar blocks composed of the same concrete used to construct the Pontoons minus the coarse aggregate. The mortar blocks shall have a bearing width and length of not more than 2 inches."

PCO 126 – The RFP as written required a crack inspection, crack mapping and repair of all the SSP surfaces. WSDOT determined that crack inspection, mapping and repair of the underside of the deck slab (soffit) provided little value to the final quality of the SSPs while adding significant time and cost to the operation. As a result, WSDOT elected to eliminate this portion of the crack inspection, mapping and repair.

This change order modifies Section 2.12.5.10.10 Concrete Repair as follows.

Delete the following sentence:

"At the end of the thermal control period, but no less than 10 days after initial set of the last concrete placed, an in-depth crack inspection shall be performed."

And replace with:

"At the end of the thermal control period, but no less than 10 days after initial set of the last concrete placed, an in-depth crack inspection shall be performed, with the exception of the underside of the deck slab (soffit) for the CTC designated cycles 2, 2a, 3 and 4."

PCO 166 – During construction of Cycle 1a (2nd cycle at CTC) SSPs, WSDOT determined that design changes needed to be made to some of the rebar in the keel slabs and end walls to eliminate rebar congestion issues. Field design changes were developed
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by WSDOT (Project Office, Headquarters Construction and the Bridge Office) and these changes were made to Cycle 1a to address the congestion issue.

This change order addresses the cost of these impacts, both the delay costs experienced at CTC as well as the cost of the actual field modifications.

PCO 197 – After the field design changes were made to the Cycle 1a SSPs to resolve the rebar congestion issue, WSDOT made formal design changes to the M22 plan sheets for future SSP Cycles 1, 2A, 3, and 4. The Bridge Office developed and released new M22 plan sheets.

The following sheets were revised:

Type 2 SSPs – Sheets SS2, SS7, SS19, SS20 and SS25
Type 5 SSPs – Sheets S2, S7, S19, S20, and S25

PCO 275 – During preparation for the Cycle 2 float out, KGM was only able to provide an eight day cure (prior to launch) for three keel slab cure drains on SSP Pontoon SNW. The RFP requires a ten day cure prior to contact with salt water.

This change order modifies Section 2.12.5.11.1 Pontoon Handling as follows.

Delete the following sentence:

"All concrete, grout, waterproofing and post-tensioning fills and closures shall have a 10-day minimum wet cure before being exposed to salt water during launch."

And replace with:

"All concrete, grout, waterproofing and post-tensioning fills and closures shall have 10-day minimum wet cure before being exposed to salt water during launch with the exception of three keel slab cure drains on Pontoon SNW. An 8-day minimum wet cure will be allowed for only the three Pontoon SNW keel slab cure drains."

Evolution of the Change:
These six issues developed at different times during the Project. Each issue will be briefly described below.

PCO 081 – KGM sent Serial Letter 0123 to WSDOT in May 2012 proposing a Category 2 DBIC to reduce the number of draft boards on the SSPs from eight to four. WSDOT responded with WSDOT Serial Letter 0125 which approved this request. In December 2012, KGM requested via RFI 507 approval to “paint” on the draft boards on future SSP cycles as an option to avoid potential damage to draft boards affixed to the SSPs. WSDOT approved this request.
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After the Project Office held further discussions with Headquarters Construction in early 2013, WSDOT determined that the reduction in the number of draft boards was actually a Category 3 (credit) change order. WSDOT sent Serial Letter 0264 in February 2013 advising KGM that a credit would be required for this DBIC.

This change order settles and resolves all credits associated with this work.

PCO 083 – WSDOT notified KGM by Serial Letter 0066 (dated April 2012) of an OIC which impacted the reinforcing bar supports being used at CTC for the construction of the SSPs. As written, the RFP allowed the Design-Builder to utilize plastic chairs for rebar support anywhere within the SSPs. Upon review of the RFP language, WSDOT determined that this was an error. WSDOT Serial Letter 0066 proposed new RFP language which would clarify where plastic chairs could be used. KGM submitted their initial response to this OIC in KGM Serial Letter 0121, notifying WSDOT of additional cost impacts.

As KGM further reviewed this OIC and worked with their steel installation subcontractor, Gerdau, to identify impacts to their operations (both direct costs as well as time impacts), KGM sent the following letters to WSDOT over the next six months:

KGM Serial Letters – 0151, 0163, 0219, and 0276

KGM Serial Letter 0276 proposed a price increase of $3,389,054 of direct costs plus an additional $324,170 of rental reimbursement for a 44 day extension of operations at the CTC Facility.

After extensive discussions with KGM to determine where the impacts and costs were the greatest, WSDOT revised the scope of work for this change in WSDOT Serial Letter 0225. The revised scope increased the areas where plastic chairs would still be allowed – interior walls and the top deck slabs of the SSPs.

KGM revised their pricing for this OIC and submitted the updated information to WSDOT in KGM Serial Letter 0360. The revised pricing was reduced to $2,397,028 with 32 days of impact.

This change order resolves any Design-Builder costs associated with this work.

PCO 126 – KGM Serial Letter 0153 (dated June 2012) provided notice to WSDOT of potential cost impacts associated with crack repair work being performed on Cycle 1 SSPs. In brief, KGM’s position was that the RFP provided prescriptive requirements for the concrete to be used in constructing the SSPs. As a result, any cracking and subsequent repairs to the SSPs were the State’s responsibility. WSDOT responded in Serial Letter 0107 (dated July 2012) advising KGM that the crack repairs were a clear Design-Builder responsibility per the RFP language. WSDOT also advised KGM to
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follow Section 1-04.5(1) with respect to providing supplemental information on this dispute.

The discussions and correspondence for this issue continued for months with additional letters being exchanged between KGM and WSDOT:

KGM Serial Letters – 0194, 0311, 0384, and 0410
WSDOT Serial Letters – 0157, 0315, 0393, and 0418

As discussed above, the dispute between WSDOT and KGM involved interpretation of the RFP and whether KGM was responsible for crack mapping and repairs of the SSPs being built at the CTC Facility in Tacoma. KGM believed that WSDOT had provided the option of using a concrete mix developed by WSDOT on the ACME project, which in KGM’s opinion made any cracking the responsibility of the Department. WSDOT disagreed with KGM’s interpretation of the RFP since the contract language regarding cracking, crack mapping and repair was considered to be specific and clear.

KGM’s estimated costs for this issue, covering all CTC SSPs, steadily increased over time, at one point reaching over $800,000 before settling near $646,000.

As part of this bundled settlement for the various PPDB issues resolved by this change order, WSDOT agreed to eliminate the inspection and repair requirements for the underside of the top deck (soffit). This area was very expensive to inspect due to the need to install scaffolding. As the soffit area is not exposed to water, cracking and subsequent repairs were not considered to be a high risk item. KGM acknowledged that elimination of this soffit inspection and repair requirement would greatly reduce the costs associated with this issue.

This change order resolves any Design-Builder costs associated with this work.

PCO 166 – On September 7, 2012, WSDOT issued a “stop work” notice to KGM to halt construction operations on Cycle 1a SSPs. WSDOT had identified a concern with rebar congestion in the keel slab and end walls for the SSPs under construction at the CTC Facility in Tacoma. While WSDOT investigated the issue and developed options to correct the rebar congestion, KGM operations at CTC were significantly impacted. On September 13, 2013, WSDOT lifted the “stop work” order and provided KGM with the field changes necessary to correct the rebar congestion.

KGM Serial Letter 0210 acknowledged the WSDOT “stop work” order, and provided notice that KGM would be incurring impacts due to the halt of construction operations. KGM Serial Letter 0214 acknowledged WSDOT’s lifting of the “stop work” order.

In November 2012, KGM Serial Letter 0269, which provided the added costs associated with this issue, was sent to WSDOT. The KGM price proposal was $617,530 which
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included 12 days of time related impacts at CTC. WSDOT and KGM staff reviewed and discussed this cost proposal at several meetings, which led to WSDOT Serial Letter 0278. As a result of these discussions, KGM revised their price proposal. The revised price proposal was submitted to WSDOT as part of KGM Serial Letter 0364. The new price proposal was for $572,310.

This change order settles any Design-Builder costs associated with this work.

PCO 197 – In January 2013, WSDOT sent KGM an OIC (WSDOT Serial Letter 0238) which made design revisions to the M22 drawings for the Type 2 and Type 5 SSPs. These design revisions were made to reduce rebar congestion issues in the keel slabs and end walls of SSPs to be built in Cycles 2, 2A, 3 and 4 at the CTC Facility in Tacoma. In summary, these design revisions reduced the quantity of rebar to be installed. KGM responded to this OIC in April of 2013 with KGM Serial Letter 0381. KGM indicated that there were impacts associated with this change which resulted in added costs and time impacts at CTC. KGM’s letter indicated the costs to be approximately $607,000 which included 12 days of time related impacts. WSDOT did not find entitlement to this request as the design changes actually reduced the quantity of rebar being installed, decreasing the contract work.

This change order settles any Design-Builder costs associated with this work.

PCO 275 – During the preparation for Cycle 2 float-out in July 2013, KGM requested a change to the RFP requirement for cure time for Pontoon SNW (RFI 644). The RFP requires a ten day cure prior to exposure to salt water. Pontoon SNW had three keel slab cure drains which would only have an eight day cure at the time of float-cut (and exposure to salt water). In KGM’s proposal, they included an additional coating for these areas. A Sika Armatec 110 would be applied to provide additional protection from salt water.

WSDOT approved this RFI and agreed to make a change to the RFP requirements for Pontoon SNW only.

This change order settles any and all Design-Builder costs associated with these PPDB issues. WSDOT met with KGM numerous times to discuss these issues (both individually as well as a group). These issues were discussed at the Project level, at the Program and Headquarters Construction level at joint WSDOT/KGM meetings in Federal Way, and at the Executive Partnering meetings. The Project Team also extensively engaged Rick Krebs from Stanton Constructability Services in these negotiations with KGM. WSDOT found entitlement for additional compensation on two of the four issues (PCOs 083 and 166). However, KGM was adamant that they were entitled to additional compensation for four of issues (PCOs 83, 126, 166, and 197) where they had submitted price proposals. After being unable to resolve these issues independently, they were
bundled together for a combined lump sum resolution. WSDOT and KGM reached a lump settlement on August 9, 2013 to resolve and close all six of these issues.

Approvals Provided:
- Project Level – Dave Becher on September 14, 2013
- Region/Program Level – Tom Horkan on September 16, 2013
- Region/Program Funding Concurrence – Alan Chan on October 21, 2013
- Headquarters Construction – Craig McDaniel on September 16, 2013
- FHWA – Anthony Sarhan on September 23, 2013

Entitlement:
This is an OIC which results in additional work and impacts for the Design-Build. As a result, the Design-Builders are entitled to additional compensation to perform this new work.

Price:
The value of KGM’s request for these six issues is shown below:

1. PCO 081 - DBIC Eliminate 4 Draft Boards – $50,000 (Credit)
2. PCO 083 – Eliminate Use of Plastic Chairs - $2,400,000
3. PCO 126 – Crack Mapping & Repairs for CTC Pontoon - $646,000
4. PCO 166 – OIC CTC Shutdown (due to rebar congestion issues) - $572,000
5. PCO 197 – OIC Changes to Rebar in Pontoon @ CTC (Types 2 and 5 Keel Slab Bar Redesign) - $550,000
6. PCO 275 – Cure Drain Waterproofing Protection - $0

Total: $4,218,000

WSDOT and KGM negotiated a lump sum in the amount of $2,200,000 to settle these six issues associated with PPDB built at the CTC facility in Tacoma. WSDOT utilized the services of Rick Krebs from Stanton Constructability Services extensively on these issues. A copy of the Engineer’s estimate for this work is attached to this change order package.

Contract Time:
This change order does not impact contract time, and no additional time is added to the contract.

Memorandum Attachments:
- Executed Change Order 122
- Change Order Checklist
- Final Negotiation Summary
- Stanton Constructability Estimate Review and Analysis
- KGM Serial Letters 0121, 0123, 0151, 0153, 0163, 0194, 0210, 0214, 0219, 0269, 0276, 0311, 0360, 0364, 0381, 0384, and 0410
- KGM RFIs 507 and 644
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- WSDOT Serial Letters 0066, 0170, 0125, 0155, 0157, 0225, 0238, 0264, 0278, 0315, 0393, and 0418
- WSDOT E-mails – PCO 166 (Stop/Start Work Notices)
- Approval Documentation

DPB: DB  
Attachments
PW File: 17.02.CO-122
WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER

DATE: 12/26/13
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CONTRACT NO: 008066
CONTRACT TITLE: SR 520 / I-5 TO MEDINA - EVERGREEN POINT FLOATING
CHANGE ORDER NO: 122 RL PPDB REVISIONS

PRIME CONTRACTOR: SW0106139
KIEWIT/GENERAL/MANSON, A JOINT
33455 6TH AVE S
FEDERAL WAY WA 98003-6335

(X) Ordered by Engineer under the terms of Section 1-04.4 of the Standard Specifications
( ) Change proposed by Contractor

ENDORSED BY: [Signature]

SURETY CONSENT:

ATTORNEY IN FACT

DATE

ORIGINAL CONTRACT AMOUNT: 586,561,000.00
CURRENT CONTRACT AMOUNT: 671,369,511.00
ESTIMATED NET CHANGE THIS ORDER: 2,200,000.00
ESTIMATED CONTRACT TOTAL AFTER CHANGE: 673,569,511.00
Approval Required: ( ) Region ( ) Olympia Service Center ( ) Local Agency

APPROVAL RECOMMENDED

( ) EXECUTED

PROJECT ENGINEER: [Signature]
State Construction Engineer: [Signature]
12/30/13
DATE
DATE 12/31/13

REGIONAL ADMIN: [Signature]
Other Approval When Required
BY: [Signature]
DATE 12/31/13

CG02v04 (revised Feb 2005)
All work, materials, and measurements to be in accordance with the provisions of the Standard Specifications and Special Provisions for the type of construction involved.

This contract is revised as follows:

The first paragraph above is revised to read:

All work, materials, and measurements to be in accordance with the request for proposal (RFP) and the contract documents for this project.

DESCRIPTION:
This change incorporates both WSDOT-Initiated Changes in accordance with General Provisions Section 1-04.4(1), and Design-Build Initiated Changes in accordance with General Provisions Section 1-04.4(2). This change order provides an equitable adjustment to the Contract Price as a result of modifications to the Pontoon Provided by the Design-Build (PPDB), resolution of Pontoon crack repair responsibility, and for impact costs incurred due to the 10 Calendar Day suspension of work associated with the PPDB keel slab rebar placement between September 7-13, 2012.

The Design-Build, Kiewit/General/Manson (KGM), by the signing of this change order agrees and certifies that:

Upon payment of this change order in the amount of $2,200,000, any and all requests for compensation arising out of or pertaining to Contract No. 008066 set forth in the following Potential Change Order (PCO) issues and associated serial letters from the KGM, including impact costs for 10 Calendar Days related to PCO 166, and Requests for Information (RFIs), have been satisfied in full and WSDOT is discharged and released from any additional requests for extra compensation in any matter arising out of the issues addressed under this Change Order for Contract No. 008066:

* PCO 81 (RFI 202) DBIC Eliminate 4 Draft Boards
  KGM Serial Letter #0123 dated May 21, 2012
* PCO 217 (RFI 507) Draft Board Paint Approval
* PCO 83 CTC Eliminate Use of Plastic Chairs
  KGM Serial Letter #112 dated May 7, 2012
  KGM Serial Letter #0121 dated May 21, 2012
  KGM Serial Letter #151 dated June 25, 2012
  KGM Serial Letter #163 dated July 9, 2012
  KGM Serial Letter #0219 dated September 19, 2012
  KGM Serial Letter #0276 dated December 7, 2012
  KGM Serial Letter #0360 dated April 1, 2013
* PCO 126 Crack Mapping and Repairs for CTC Pontoons
  KGM Serial Letter #0153 dated June 26, 2012
  KGM Serial Letter #0194 dated August 9, 2012
  KGM Serial Letter #0311 dated February 12, 2013
  KGM Serial Letter #0384 dated April 29, 2013
  KGM Serial Letter #0410 dated May 24, 2013
CONSTRUCTION REQUIREMENTS:

PCO 81  Eliminate 4 Draft Boards

The following requirement specified under Technical Requirements Section
2.12.5.11.1 Pontoon Handling shall be deleted:

"Draft boards shall be installed on each side of each corner of each Pontoon
for a total of eight draft boards per Pontoon."

and replaced with:

"Draft boards shall be installed or painted on one side of each corner of
each Pontoon for a total of four draft boards per Pontoon."

PCO 83  Eliminate Use of Plastic Chairs

A new section shall be incorporated in Technical Requirements Section
2.12.5.10 Pontoon. The following shall be inserted after Technical
Requirements Section 2.12.5.10.2.3:

"2.12.5.10.2.4 Steel Reinforcing Bar Supports
Steel reinforcing bar supports used in the exterior walls and keel slabs of
Supplemental Stability Pontoon shall be mortar blocks composed of the same
concrete used to construct the Pontoon minus the coarse aggregate. The
mortar blocks shall have a bearing width and length of not more than 2
inches."

PCO 126  Crack Mapping and Repairs for CTC Pontoon

The following requirement specified under Technical Requirements Section
2.12.5.10.10 Concrete Repair shall be deleted:

"At the end of the thermal control period, but no less than 10 days after
initial set of the last concrete placed, an in-depth crack inspection shall
be performed."

and replaced with:

"At the end of the thermal control period, but no less than 10 days after
initial set of the last concrete placed, an in-depth crack inspection shall
be performed, with the exception of the underside of the deck slab (soffit)
for the CTC designated cycles 2, 2a, 3 and 4."
PCO 197  Changes to Rebar in Pontoons at CTC
The following Pontoon Technical Minimum Requirements (Appendix M22) plan sheets shall be deleted and replaced with the plan sheets provided on pages 6 through 15 of this change order. The replacement plan sheets are for the Type 2 Supplemental Stability Pontoons Bridge Sheets No. SS2, SS7, SS19, SS20, and SS25; and Type 5 Supplemental Stability Pontoons Bridge Sheets No. S2, S7, S19, S20 and S25.

PCO 275 (RFT 644)  Cure Drain Waterproofing Protection
Technical Requirements Section 2.12.5.11.1 Pontoon Handling shall be revised as follows:

In the paragraph starting with the sentence, "Pontoon shall not be launched until completion of all concreting, post-tensioning and grouting; the grouting of all form tie holes; and final sealing of the prestressed anchor recesses", delete the following sentence: "All concrete, grout, waterproofing and post-tensioning fills and closures shall have a 10-day minimum cure before being exposed to salt water during launch."

and replace with:
"All concrete, grout, waterproofing and post-tensioning fills and closures shall have 10-day minimum wet cure before being exposed to salt water during launch with the exception of three keel slab cure drains on Pontoon SNW. An 8-day minimum wet cure will be allowed for only the three Pontoon SNW keel slab cure drains."

PAYMENT:
As mutually agreed for the Work as described in this change order, WSDOT will reimburse the Design-Build under the new lump sum item "PPDB Revisions" in the amount of $2,200,000. The lump sum amount shall be full compensation for all costs related to Work addressed under this change order including the following:

* PCO 166 - Impact costs for all additional work during the 10 Calendar Day suspension and resumption of work between September 7-13, 2012 associated with the PPDB keel slab rebar placement at the Concrete Technology Corporation site.

TIME:
There shall be no increase in Contract Time as a result of this change order.

DBE GOAL:
Monies paid under Change Order for administrative overhead, delay and impacts to the Work that do not include opportunities for sub-contractible work, and therefore DBE participation, should be documented and will be considered accordingly as part of the good faith effort.
## Washington State Department of Transportation
### Change Order

**Contract No:** 008066  
**Change Order No:** 122 R1

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**Note:**
2,200,000.0

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** CURE WATER DRAIN
(SUGGESTED LOCATION)

** CURE WATER DRAIN GROUT (TYP.)
SEE DETAIL BK. SHEET B27

** SEE SHEET 506 FOR SPACING NEAR P.T. ANCHORAGE.

KEEL SLAB PLAN

** LOCATE LAP SPLICES AS NECESSARY.
TOP AND BOTTOM MAT LAP SPLICES SHALL NOT OVERLAP.
LAP SPLICES SHALL NOT OVERLAP WITH INTERSECTING WALLS.

MINIMUM LAP SPlice | BAR NUMBER
--- | ---
3-1/2" | 3
6-1/2" | 11

APPENDIX M22
PONTOON
MINIMUM TECHNICAL REQUIREMENTS

WASHINGTON STATE
Department of Transportation
BRIDGE AND STRUCTURES OFFICE
KEEL SLAB PLAN

1/29/12
KEEL SLAB PLAN

4" REBAR @ 8'-0"

SPACING NEAR PT. ANCHORAGE.

+ - 6 SPA @ 8'-0"
+ - 2'-0"

SYMETRICAL ARC E

CURE WATER DRAW
(SUGGESTED LOCATION)

CURE WATER DRAW 80% TYP.
SEE DETAIL BE, SHEET 5527

MINIMUM LAP SPlice 12X

- 3'-0"
- 2'-0"
- 1'-0"

TOP MAT

BOTTOM MAT

- LOCAL LAP SPlices AS NECESSARY.
TOP AND BOTTOM MAT LAP SPICES SHALL NOT OVERLAP.
LAP SPICES SHALL NOT OVERLAP WITH INTERSECTING WALLS.

APPENDIX M22
PONToon
MINIMUM TECHNICAL REQUIREMENTS

KEEL SLAB PLAN

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
BRIDGE AND STRUCTURES OFFICE

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