



RECEIVED

Change Record

OCT 08 2019

Contract Number 008952	Contract Title I-5, NB MLK Jr Way to NE Ravenna Bridge, Pavement Repair & More	Federal Aid Number HSIP-0053(974)
Change Order Number 28	Change Description Segment 1 Friction Grinding	Date Sep 25, 2019
Region Northwest Region	Project Engineer <i>EX-</i> Edward W. Kane, P.E.	Phone Number 425-225-8725

Prime Contractor / Design-Builder  
Guy F. Atkinson Construction

- Ordered by Engineer under the terms of Section 1-04.4 of the Standard Specifications or the  
 Change proposed by Contractor / Design-

Evolution & Description Of Change

Attached for review and further processing is PE recommended Change Order No. 28. This change order compensates the Design-Builder for added Work to grind PCCP on northbound I-5 and the northbound West Seattle Bridge Ramp.

In July of 2019, WSDOT tested the roadway surface of I-5 for surface friction. It was determined that surface friction values were insufficient (less than 36) in multiple locations in Segment 1. The Project Engineer's Office and Design-Builder performed an overnight investigation of the PCCP surface at Location C, Segment 1, and it appeared that the PCCP tining had worn down. The Contractor provided documentation that the surface received a broom finish and tining in accordance with Standard Specifications Section 5-05.3(11). As a result, WSDOT agreed to proceed with a change order to grind PCCP at Location C, Segment 1 to correct the insufficient surface friction.

RECEIVED

SEP 30 2019

SnoKing Area

*PK*

- Distribution By: Project Office  
 Copy of Change Records & Change Order w/Backup - Project Engineer  
 Copy of ONLY Change Order - Prime Contractor / Design-Builder  
 Electronic Copy of Change Records & Change Order w/Backup - State Construction Office  
 Original of Change Records & Change Order w/Backup - Region Construction Office  
Region  
 Original of Change Records & Change Order w/Backup - State Construction Office

Contract Number 008952	Contract Title I-5, NB MLK Jr Way to NE Ravenna Bridge, Pavement Repair & More	Change Order Number 28
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**Basis of Cost & Justification:**

New item "CO#28 Cement Concrete Pavement Grinding" will be paid at the agreed lump sum amount of \$445,858.00. This shall be full pay for all labor, equipment, material and associated costs necessary to complete the Work, excluding traffic control.

New item "CO#28 Project Temporary Traffic Control" will be paid at the agreed unit price of \$11,130.00 per day.

The Design-Builder is entitled to additional compensation under Standard Specifications Section 1-04.4, Item 5, because Concrete Pavement Grinding Segment 1 was not included in the RFP. The Design-Builder provided evidence that they followed WSDOT specifications to texture the new PCCP; therefore, the reduced surface friction values are not the fault of the Design-Builder.

The net estimated amount for this change order is \$546,028.00. This pricing is appropriate because the Project Engineer's Office verified labor hours and weighted wage rates using certified payrolls. Equipment rental and operation rates were obtained from the Rental Rate Blue Book. Traffic drum costs are based on online quotes from Sunbelt Rentals. Unit pricing for PCCP Grinding and Temporary Pavement Markings are based on Northwest Region standard item bid pricing history.

**Contract Time:**

This change order does not affect Contract time.

**Prior Approvals:**

Edward W. Kane, Project Engineer, gave his approval to proceed on August 6, 2019.  
 Cathy Arnold, NWR Engineering Manager, gave her approval on August 6, 2019.  
 Jim Cuthbertson, Assistant State Construction Engineer, gave his approval on August 6, 2019.

**List Attachments:**

- Checklist
- Estimate
- Approvals

Distribution By: Project Office  
 Copy of Change Records & Change Order w/Backup - Project Engineer  
 Copy of ONLY Change Order - Prime Contractor / Design-Builder  
 Electronic Copy of Change Records & Change Order w/Backup - State Construction Office  
 Original of Change Records & Change Order w/Backup - Region Construction Office  
Region  
 Original of Change Records & Change Order w/Backup - State Construction Office



Cont. #: <u>008952</u> Cont. Title: <u>I-5 NB MLK Jr. Way To NE Ravenna BR. Pavement Repair &amp; More</u>		If Yes, Approval from State Construction Office Required
C.O. #: <u>28</u> C.O. Title: <u>Segment 1 Friction Grinding</u>		
<b>I. Executed by the State Construction Office</b>		
1. Cost or credit equal to or exceeding \$500,000.*3	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X
2. Change in the contract documents beyond the scope, intent or termini of the original contract. *2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X
3. Termination of or Changes in Work Committed to DBEs..	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X
4. Change in contract time greater than 30 working days.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X
<b>II. Executed by the Region</b>		
5. Determination of impacts and/or overhead.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X
6. Design or construction work that does not comply with the Mandatory Standards	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X
7. A change to a Chapter 1 General Provisions.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X
8. A change to a technical requirement in any of the following sections: Geotechnical, Environmental, Pavement, Project Documentation, Bridges and Structures, Control of Materials, Minority, Small, Veteran and Women's Business Enterprises (MSVWBE) Goals, Quality Management Plan, or WSDOT Standard Specifications.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X
9. Determination of changed condition (Section 1-04.7 of the Request For Proposal).	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X
10. Settlement of a claim (Section 1-09.11(2) of the Request For Proposal).	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X
11. Repair of damage regarding "Acts of God" or "acts of the public enemy or of government authorities (Section 1-07.13 of the Request For Proposal).	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X
12. A "no-cost" change based upon a determination of "equal or better".	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X

**Approvals obtained:**

Project Engineer: (REQUIRED) Edward W. Kane, P.E. Date: 8/6/2019  
 Region: (REQUIRED) Cathy Arnold, P.E. Date: 8/6/2019  
 State Construction Office: (REQUIRED) Jim Guthbertson, P.E. Date: 8/6/2019

**To be completed by the Project Engineer :**

CO Reason(s) (See CCIS Source/Outcome): AK-01 UC AW CR  
 Change Order Prepared By: Brendan Byron Date: 8/19/2019  
 Has change been entered as lesson learned?  Yes  No  N/A  
 Has design documentation been updated?  Yes  No  N/A  
 Is change approved by program management?  Yes  No  N/A

**To be completed by the Region :**

Is the change eligible for Federal participation?  Yes  No  N/A  
 Change Order Reviewed By: [Signature] Date: 10-1-2019

This form represents the minimum information required by the State Construction Office. \*3

\*1 Cost or Credit greater than \$200,000 on Federal Stewardship requires FHWA approval (see Construction Manual - Ch. 1-04.4)  
 \*2 Per RCW 47.28.050, any change beyond \$7,500 that is beyond the original scope shall go through the competitive bidding process.  
 \*3 Changes that do not meet any of the itemized criteria above may be executed by the PE with Region approval.

**WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION  
CHANGE ORDER**

DATE: 09/11/19  
Page 1 of 5

CONTRACT NO: 008952 FEDERAL AID NO: HSIP-0053 (974)  
CONTRACT TITLE: DESIGN BUILD I-5, NB MLK JR WAY TO NE RAVENNA BRID  
CHANGE ORDER NO: 28 SEGMENT 1 FRICTION GRINDING

PRIME CONTRACTOR: SW0252050 GUY F. ATKINSON CONSTRUCTION, LLC.  
707 SOUTH GRADY WAY SUITE 500  
RENTON WA 98057-3224

Ordered by Engineer under the terms of Section 1-04.4 of the Standard Specifications

Change proposed by Contractor

<p>ENDORSED BY:</p> <p><u>Bob Dugan, Vice President</u></p> <p>CONTRACTOR</p> <p><u>9/19/19</u></p> <p>DATE</p>	<p>SURETY CONSENT:</p> <hr/> <p>ATTORNEY IN FACT</p> <hr/> <p>DATE</p>
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ORIGINAL CONTRACT AMOUNT: 38,599,899.00  
CURRENT CONTRACT AMOUNT: 41,449,864.44  
ESTIMATED NET CHANGE THIS ORDER: 546,028.00  
ESTIMATED CONTRACT TOTAL AFTER CHANGE: 41,995,892.44

Approval Required:  Region  Olympia Service Center  Local Agency

<p><input checked="" type="checkbox"/> APPROVAL RECOMMENDED <input type="checkbox"/> EXECUTED</p> <p><u>Edward W. Kane</u></p> <p>PROJECT ENGINEER</p> <p><u>9/25/2019</u></p> <p>DATE</p>	<p>EXECUTED: <input checked="" type="checkbox"/></p> <p><u>J. Cuthbertson</u></p> <p>STATE CONSTRUCTION ENGINEER</p> <p><u>10/04/19</u></p> <p>DATE</p>
<p><input checked="" type="checkbox"/> APPROVAL RECOMMENDED <input type="checkbox"/> EXECUTED</p> <p>REGIONAL ADMIN:</p> <p><u>Stephen Strand</u></p> <p>BY: <u>STEPHEN STRAND</u></p> <p><u>10-1-2019</u></p> <p>DATE</p>	<p>OTHER APPROVAL WHEN REQUIRED</p> <hr/> <p>SIGNATURE _____ DATE _____</p> <hr/> <p>REPRESENTING _____</p>

**WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION  
CHANGE ORDER**

DATE: 09/11/19  
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CONTRACT NO: 008952

CHANGE ORDER NO: 28

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:

**DESCRIPTION**

This changes order compensates the Design-Builder for added Work to grind PCCP on northbound I-5 and the northbound West Seattle Bridge Ramp.

**CONSTRUCTION REQUIREMENTS**

The Design-Builder shall grind PCCP to remove all existing surface texturing in the areas shown on Pages 4 and 5 of this change order.

**MEASUREMENT AND PAYMENT**

New item "CO#28 Cement Concrete Pavement Grinding" will be paid at the agreed lump sum amount of \$445,858.00. This shall be full pay for all labor, equipment, material and associated costs necessary to complete the Work, excluding traffic control.

New item "CO#28 Project Temporary Traffic Control" will be paid at the agreed unit price of \$11,130.00 per day.

**CONTRACT TIME**

This change order does not affect Contract time.

**WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION  
CHANGE ORDER**

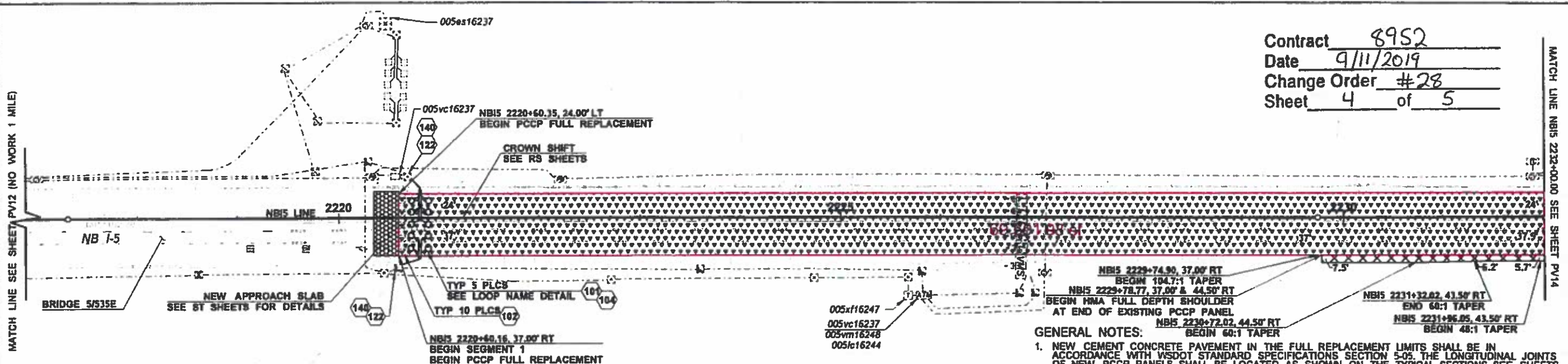
DATE: 09/11/19  
Page 3 of 5

<b>CONTRACT NO: 008952</b>	<b>CHANGE ORDER NO: 28</b>
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ITEM NO	GROUP NO	STD ITEM	ITEM DESCRIPTION	UNIT MEASURE	UNIT PRICE	EST QTY CHANGE	EST AMT CHANGE
1027	03	5712	CO#28 CEMENT CONCRETE PAVEMENT GRINDING	L.S.	0.00	0.00	445,858.00
1028	03	6971	CO#28 PROJECT TEMPORARY TRAFFIC CONTROL	DAY	11,130.00	9.00	100,170.00

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546,028.00  
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Contract 8952  
 Date 9/11/2019  
 Change Order #28  
 Sheet 4 of 5



**LEGEND**

- REPAIR CONCRETE PANEL
- PARTIAL DEPTH SPALL REPAIR
- REPLACEMENT PANEL
- PCCP FULL REPLACEMENT LIMITS
- HMA FULL DEPTH
- HMA PLANE AND INLAY (0.15' DEPTH)
- HMA PLANE AND INLAY (0.25' DEPTH)
- NEW BRIDGE APPROACH SLAB
- FENCE
- CONCRETE BARRIER
- IMPACT ATTENUATOR
- EXISTING EDGE OF PAVEMENT
- EXISTING CONCRETE BARRIER
- EXISTING BEAM GUARDRAIL

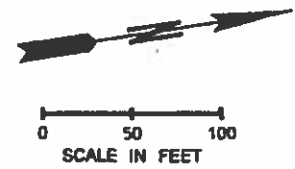
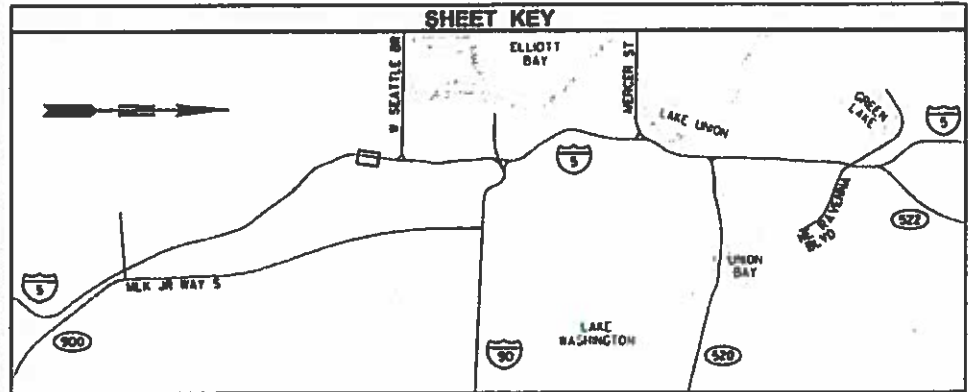
**LOOP NAME DETAIL**

LANE NB 5	-MN-5 0 0 -MN-85
LANE NB 4	-MN-4 0 0 -MN-84
LANE NB 3	-MN-3 0 0 -MN-83
LANE NB 2	-MN-2 0 0 -MN-82
LANE NB 1	-MN-1 0 0 -MN-81

**SHOULDER AND GORE PAVING NOTES:**

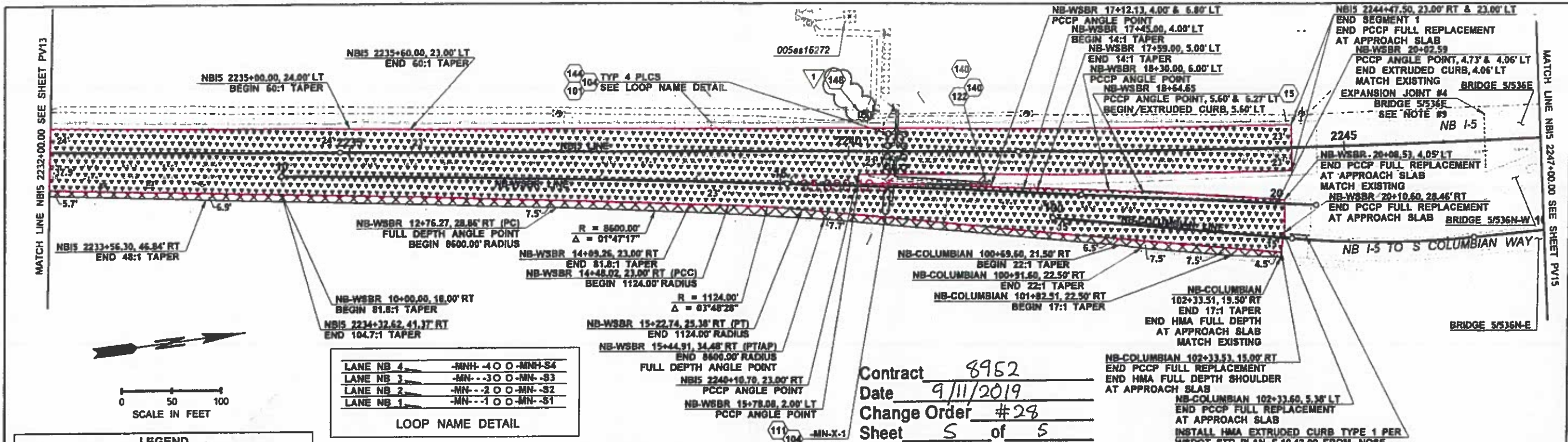
- WHERE EXISTING SHOULDER PCCP PANELS ARE RETAINED CRACKED PANELS SHALL BE REPLACED AND SEVERELY SPALLED PANELS REPAIRED. CONSTRUCT THE REPLACEMENT PANEL TO THE SAME DEPTH AS THE ADJACENT SHOULDER CONCRETE.
- THE LONGITUDINAL JOINTS AND THE OUTSIDE EDGE OF SHOULDER SHALL BE STRAIGHT WITHOUT JOGGING IN AND OUT.
- THE MINIMUM WIDTH OF A PCCP PANEL SHALL BE 2.0 FEET WITHIN GORES. PANELS LESS THAN 4.0 FEET IN WIDTH SHALL HAVE ADDITIONAL REINFORCEMENT TO PREVENT CRACKING. ONE NO. 4 EPOXY-COATED REINFORCING BAR SHALL BE ADDED FOR EACH FOOT OR FRACTION OF A FOOT IN WIDTH. THE BARS SHALL BE A MINIMUM OF 3 INCHES FROM A JOINT WITH APPROXIMATELY EQUAL SPACES ACROSS THE WIDTH OF THE PANEL AND PLACED AT APPROXIMATELY MID-DEPTH.

- GENERAL NOTES:**
- NEW CEMENT CONCRETE PAVEMENT IN THE FULL REPLACEMENT LIMITS SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS SECTION 5-05. THE LONGITUDINAL JOINTS OF NEW PCCP PANELS SHALL BE LOCATED AS SHOWN ON THE TYPICAL SECTIONS. SEE SHEETS RS01 THROUGH RS08.
  - PAVEMENT SMOOTHNESS FOR THE FULL REPLACEMENT AREA PCCP SHALL BE IN ACCORDANCE WITH SECTION 5-05 OF THE WSDOT STANDARD SPECIFICATIONS.
  - AT LOCATIONS B, D, AND E EXISTING PCCP PANELS THAT ARE BROKEN INTO THREE OR MORE PIECES OR HAVE SETTLED 1/2-INCH OR MORE SHALL BE REPLACED. REPLACE CORNER CRACKED PANELS A DIAGONAL CRACK THAT INTERSECTS ADJACENT TRANSVERSE AND LONGITUDINAL JOINT USING PARTIAL OR FULL PANEL REPLACEMENT. THE DIMENSION OF PARTIAL PANEL REPLACEMENT SHALL BE IN ACCORDANCE WITH THE MINIMUM AND MAXIMUM DIMENSIONS IN SECTION 5-01.3(4) OF THE STANDARD SPECIFICATIONS. REPLACEMENT PANELS SHALL BE AT THE SAME THICKNESS AS THE PANEL THAT WAS REMOVED, BUT NOT LESS THAN 0.75 FEET THICK.
  - REPAIR SPALLS GREATER THAN 6 INCHES IN WIDTH AND LENGTH IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION SECTION 5-01.3(5). SPALL LOCATIONS WITH A SPALL DEPTH GREATER THAN 6 INCHES WILL REQUIRE FULL OR PARTIAL REPLACEMENT OF THE PANEL IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION SECTION 5-01.
  - GRIND EXISTING PCCP AND PANEL REPLACEMENTS WITHIN THE LIMITS OF THE PROJECT, UNLESS OTHERWISE SPECIFIED. IF GRINDING THE LANES ONLY WOULD LEAVE MORE THAN A 1/4-INCH ELEVATION DIFFERENCE BETWEEN THE LANE AND SHOULDER IN AREAS OF CONCRETE SHOULDER, GRIND THE SHOULDER TO REMOVE THE ELEVATION DIFFERENCE BETWEEN THE SHOULDER AND THE LANE. TAPER THE SHOULDER GRIND SO THAT GRINDING MATCHES THE SHOULDER ELEVATION A MINIMUM OF 3.0 FEET FROM THE LANE EDGE. PCCP GRINDING AND PAVEMENT SMOOTHNESS FOR THE GRINDING AREA SHALL BE IN ACCORDANCE WITH SECTION 5-01 OF THE WSDOT STANDARD SPECIFICATIONS.
  - WITHIN THE PLANING BITUMINOUS PAVEMENT AND HMA OVERLAY LIMITS, SEAL CRACKS MORE THAN 1/4-INCH WIDE IN ACCORDANCE WITH SECTION 5-04 OF THE STANDARD SPECIFICATIONS AND AMENDMENTS TO THE STANDARD SPECIFICATIONS. IN AREAS WHERE THE EXISTING HMA WILL BE PLANED PRIOR TO PLACING HMA, CRACK SEALING SHALL OCCUR AFTER THE AREAS TO BE CRACK SEALED HAVE BEEN PLANED.
  - REPAIRING ALLIGATOR CRACKED HMA PAVEMENT SHALL BE ACCOMPLISHED BY EXCAVATING THE EXISTING HMA AND UNDERLYING BASE AND CONSTRUCTING NEW HMA AND BASE THE SAME THICKNESSES AS THE EXISTING HMA AND BASE.
  - PRIOR TO REPAVING HMA RAMPS, REMOVE ANY PCCP PANELS THAT ARE SHATTERED, BY SAW CUTTING AND REPLACE WITH LIKE AMOUNT OF HMA CLASS 1/2-INCH PG 64-22 AND STABILIZE AND RE-COMPACT BASE MATERIAL IN ACCORDANCE WITH THE MANDATORY STANDARDS.
  - FOR EXPANSION JOINT DETAILS, SEE ST SHEETS.
  - INSTALL NEW TRAFFIC LOOPS PRIOR TO HMA PAVING OPERATION.
  - SEE PAVEMENT MARKING PLAN SHEETS MK01 THROUGH MK38 FOR PAVEMENT MARKING REQUIREMENTS.
  - SEE ALIGNMENT/SITE PREPARATION/UTILITIES PLAN SHEETS AL01 THROUGH AL38 FOR EXISTING UTILITIES.
  - SEE ROADWAY SECTIONS SHEETS RS01 THROUGH RS08 FOR FULL REPLACEMENT AREA PCCP AND HMA DEPTHS.
  - SEE TN SHEETS FOR ITS ABBREVIATIONS, LEGEND AND NOTES.
  - PROTECT ALL ITS AND ELECTRICAL DEVICES, JUNCTION BOXES, VAULTS AND CONDUIT UNLESS OTHERWISE NOTED.
  - ALL DRAINAGE AND UTILITY STRUCTURES WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO FINAL GRADE.
  - CONTRACTOR TO LOCATE, IN THE FIELD, AREAS OF HMA REPAIR AND SHATTERED PCCP PANELS UNDER EXISTING HMA OVERLAY. SEE GENERAL NOTES 7 AND 8.



**ATKINSON**  
 DEC 11 2017  
 RELEASED FOR CONSTRUCTION

FILE NAME c:\pwworking\atkinschmidtd\03971951C8952_P8_PV13.dgn	TIME 10:39:57 AM	DATE 11/18/2017	DESIGNED BY C. WEEKS/L. ITTYCHERIAH	ENTERED BY A. KIRDAHY/L. AGRON	CHECKED BY A. SCHMIDTMAN/M. WENEGER	PROJ. ENGR. D. LINDBERG	REGIONAL ADM. L. ENG	REVISION	DATE	BY	REVISION	DATE	BY	REGION NO. 10	STATE WASH	FED.AID PROJ.NO. HSIP-0053(974) NHPP-0053(974)	CONTRACT NO. C8952	LOCATION NO.	FOR ITS ONLY	Washington State Department of Transportation	I-5 NB MLK JR WAY TO NE RAVENNA BR PAVEMENT REPAIR & MORE	PLAN REF NO PV13	SHEET OF SHEETS
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LANE NB 4	-MN-400-MN-S4
LANE NB 3	-MN-300-MN-S3
LANE NB 2	-MN-200-MN-S2
LANE NB 1	-MN-100-MN-S1

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 Date 9/11/2019  
 Change Order #28  
 Sheet S of 5

	- REPAIR CONCRETE PANEL
	- PARTIAL DEPTH SPALL REPAIR
	- PARTIAL REPLACEMENT PANEL
	- FULL REPLACEMENT PANEL
	- PCCP FULL REPLACEMENT LIMITS
	- HMA FULL DEPTH
	- HMA PLANE AND INLAY (0.15' DEPTH)
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	- FENCE
	- CONCRETE BARRIER
	- IMPACT ATTENUATOR
	- EXISTING EDGE OF PAVEMENT
	- EXISTING CONCRETE BARRIER
	- EXISTING BEAM GUARDRAIL

ATKINSON  
 FEB 13 2018  
 RELEASED FOR CONSTRUCTION

**GENERAL NOTES:**

- NEW CEMENT CONCRETE PAVEMENT IN THE FULL REPLACEMENT LIMITS SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS SECTION 5-05. THE LONGITUDINAL JOINTS OF NEW PCCP PANELS SHALL BE LOCATED AS SHOWN ON THE TYPICAL SECTIONS. SEE SHEETS RS01 THROUGH RS08.
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- REPAIR SPALLS GREATER THAN 6 INCHES IN WIDTH AND LENGTH IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION SECTION 5-01.3(5). SPALL LOCATIONS WITH A SPALL DEPTH GREATER THAN 6 INCHES WILL REQUIRE FULL OR PARTIAL REPLACEMENT OF THE PANEL IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION SECTION 5-01.
- GRIND EXISTING PCCP AND PANEL REPLACEMENTS WITHIN THE LIMITS OF THE PROJECT, UNLESS OTHERWISE SPECIFIED, IF GRINDING THE LANES ONLY WOULD LEAVE MORE THAN A 1/4-INCH ELEVATION DIFFERENCE BETWEEN THE LANE AND SHOULDER IN AREAS OF CONCRETE SHOULDER, GRIND THE SHOULDER TO REMOVE THE ELEVATION DIFFERENCE BETWEEN THE SHOULDER AND THE LANE. TAPER THE SHOULDER GRIND SO THAT GRINDING MATCHES THE SHOULDER ELEVATION A MINIMUM OF 3.0 FEET FROM THE LANE EDGE. PCCP GRINDING AND PAVEMENT SMOOTHNESS FOR THE GRINDING AREA SHALL BE IN ACCORDANCE WITH SECTION 5-01 OF THE WSDOT STANDARD SPECIFICATIONS.
- WITHIN THE PLANING BITUMINOUS PAVEMENT AND HMA OVERLAY LIMITS, SEAL CRACKS MORE THAN 1/4-INCH WIDE IN ACCORDANCE WITH SECTION 5-04 OF THE STANDARD SPECIFICATIONS AND AMENDMENTS TO THE STANDARD SPECIFICATIONS. IN AREAS WHERE THE EXISTING HMA WILL BE PLANED PRIOR TO PLACING HMA, CRACK SEALING SHALL OCCUR AFTER THE AREAS TO BE CRACK SEALED HAVE BEEN PLANED.
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- PRIOR TO REPAIRING HMA RAMPS REMOVE ANY PCCP PANELS THAT ARE SHATTERED BY SAW CUTTING AND REPLACE WITH LIKE AMOUNT OF HMA CLASS 1/2-INCH PG 64-22, AND STABILIZE AND RE-COMPACT BASE MATERIAL IN ACCORDANCE WITH THE MANDATORY STANDARDS.
- FOR EXPANSION JOINT DETAILS, SEE ST SHEETS.
- INSTALL NEW TRAFFIC LOOPS PRIOR TO HMA PAVING OPERATION.
- SEE PAVEMENT MARKING PLAN SHEETS MK01 THROUGH MK38 FOR PAVEMENT MARKING REQUIREMENTS.
- SEE ALIGNMENT/SITE PREPARATION/UTILITIES PLAN SHEETS AL01 THROUGH AL38 FOR EXISTING UTILITIES.

**CONSTRUCTION NOTES:**

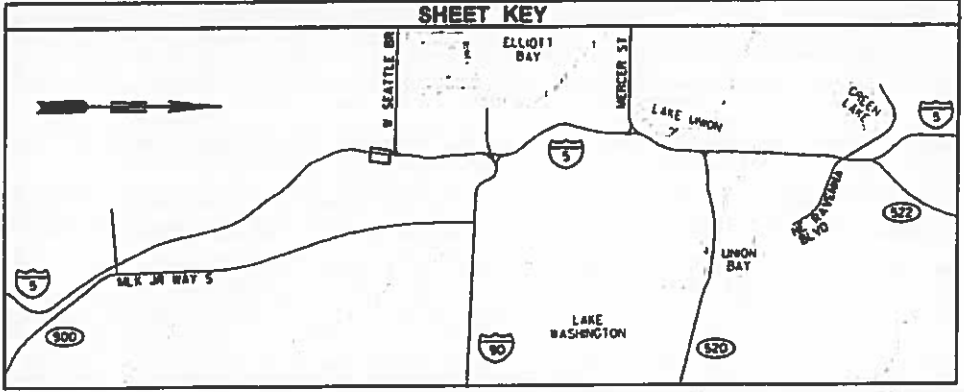
- 15) CONSTRUCT CEMENT CONCRETE EXTRUDED CURB TYPE 5 PER WSDOT STD. PLAN F-10.42.00.

**GENERAL NOTES (CONTD.):**

- SEE ROADWAY SECTIONS SHEETS RS01 THROUGH RS08 FOR FULL REPLACEMENT AREA PCCP AND HMA DEPTHS.
- SEE TN SHEETS FOR ITS ABBREVIATIONS, LEGEND AND NOTES.
- PROTECT ALL ITS AND ELECTRICAL DEVICES, JUNCTION BOXES, VAULTS AND CONDUIT UNLESS OTHERWISE NOTED.
- ALL DRAINAGE AND UTILITY STRUCTURES WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO FINAL GRADE.
- CONTRACTOR TO LOCATE, IN THE FIELD, AREAS OF HMA REPAIR AND SHATTERED PCCP PANELS UNDER EXISTING HMA OVERLAY. SEE GENERAL NOTES 7 AND 8.

**SHOULDER AND GORE PAVING NOTES:**

- WHERE EXISTING SHOULDER PCCP PANELS ARE RETAINED, CRACKED PANELS SHALL BE REPLACED AND SEVERELY SPALLED PANELS REPAIRED. CONSTRUCT THE REPLACEMENT PANEL TO THE SAME DEPTH AS THE ADJACENT SHOULDER CONCRETE.
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FILE NAME	c:\pwworking\atkinson\mfd0397195\c8952_PS_PV14.dgn			PROJ. NO.	10	STATE	WASH	FED. AID PROJ. NO.	HSIP-0053(974) NHPP-0053(974)				I-5 NB MLK JR WAY TO NE RAVENNA BR PAVEMENT REPAIR & MORE	PLAN REF NO	PV14
TIME	1:01:07 PM			JOB NUMBER	C8952	LOCATION NO.			SHEET					OF	SHEETS
DATE	2/9/2018			DESIGNED BY	C. WEEKS / L. ITTYCHERIAH			REV 1 - RFI0014	01/15/18						
DESIGNED BY	wgsnemf			ENTERED BY	A. KIRDAHY / I. AGRON			REV 0 - RELEASED FOR CONSTRUCTION	12/07/17						
ENTERED BY	A. KIRDAHY / I. AGRON			CHECKED BY	A. SCHMIDTMAN / M. WEGENER			REV B - FINAL REVIEW	10/16/17						
CHECKED BY	A. SCHMIDTMAN / M. WEGENER			PROJ. ENGR.	D. LINDBERG			REV A - PRELIMINARY REVIEW	06/21/17						
PROJ. ENGR.	D. LINDBERG			REGIONAL ADM.	L. ENG			REVISION	DATE	BY					



**Contract 008952**  
**CHANGE ORDER NO. 28**  
**ESTIMATE WITH UNIT BID ANALYSIS**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

<b>Item Description</b>	<b>Total</b>
Subcontractor Advanced Traffic Control	\$76,886.10
Subcontractor Acme PCCP Grinding	\$478,114.00
Subcontractor Krazan Inspection	\$9,372.78
Subcontractor Specialized Pavement Markings	\$21,936.30
WSDOT Independent Estimate	\$586,309.18
Contractor's Cost Proposal	\$546,027.17
Percent Difference	-6.87%

<b>Total Amount This Change Order</b>	<b><u>\$546,028.00</u></b>
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**Contract 008952**  
**CHANGE ORDER NO. 28**  
**COST ESTIMATE**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

Item Description	ST	OT	Unit	ST	OT	Total
Traffic Control Supervisor	90.0	18.0	HOUR	\$54.47	\$74.50	\$6,243.30
Traffic Control Laborer	90.0	13.5	HOUR	\$47.95	\$64.94	\$5,192.19
Traffic Control Laborer	90.0	13.5	HOUR	\$47.95	\$64.94	\$5,192.19
Traffic Control Laborer	90.0	13.5	HOUR	\$47.95	\$64.94	\$5,192.19
Traffic Control Laborer	90.0	13.5	HOUR	\$51.48	\$70.02	\$5,578.47
Traffic Control Laborer	90.0	13.5	HOUR	\$51.48	\$70.02	\$5,578.47
Traffic Control Laborer	90.0	13.5	HOUR	\$51.48	\$70.02	\$5,578.47
Subtotal Subcontractor Advanced Traffic Control Labor						\$38,555.28
29% Markup on Labor						\$11,181.03
<b>Total Subcontractor Advanced Traffic Control Labor</b>						<b>\$49,736.31</b>
Item Description	Qty.	Unit	Unit Price			Total
Pickup, 4x2, 3/4 Ton, Gas	103.5	HOUR	\$14.93			\$1,545.26
Pickup, 4x2, 3/4 Ton, Gas	103.5	HOUR	\$14.93			\$1,545.26
Pickup, 4x2, 3/4 Ton, Gas	103.5	HOUR	\$14.93			\$1,545.26
Pickup, 4x2, 3/4 Ton, Gas	103.5	HOUR	\$14.93			\$1,545.26
Truck Mounted Attenuator	90.0	HOUR	\$5.64			\$507.60
Truck Mounted Attenuator	90.0	HOUR	\$5.64			\$507.60
Portable Changeable Message Sign	90.0	HOUR	\$7.83	<b>ent 1 Friction Gri</b>		\$704.70
Portable Changeable Message Sign	90.0	HOUR	\$7.83			\$704.70
Traffic Barrel (2 week rental)	160.0	EACH	\$24.00			\$3,840.00
Traffic Barrel Weight (2 week rental)	160.0	EACH	\$24.00			\$3,840.00
Subtotal Subcontractor Advanced Traffic Control Equipment						\$16,285.62
21% Markup on Equipment						\$3,419.98
<b>Total Subcontractor Advanced Traffic Control Equipment</b>						<b>\$19,705.60</b>
Subtotal Subcontractor Advanced Traffic Control						\$69,441.91
12% Prime Markup						\$3,000.00
10% Prime Markup						\$4,444.19
<b>Total Subcontractor Advanced Traffic Control</b>						<b>\$76,886.10</b>

**Notes:**

Labor and Equipment hours assume 9 shifts to complete the Work. Labor rates are based on Subcontractors' certified payrolls. Equipment rates are from the Rental Rate Blue Book. Traffic Barrel rates are from online rental vendor Sunbelt Rentals.

**Contract 008952**  
**CHANGE ORDER NO. 28**  
**COST ESTIMATE**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

<b>Std. Item</b>	<b>Item Description</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
5712	Cement Concrete Pavement Grinding	18,389	S.Y.	\$26.00	\$478,114.00
<b>Total Subcontractor Acme PCCP Grinding</b>					<b>\$478,114.00</b>

**Notes:**

Unit pricing for Cement Concrete Pavement Grinding is based on low bids from Northwest Region contracts awarded from August 19, 2016 through August 19, 2019.

**Contract 008952**  
**CHANGE ORDER NO. 28**  
**COST ESTIMATE**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

Item Description	ST	OT	Unit	ST	OT	Total
<b>Labor</b>						
Inspector	72.0	8.0	HOUR	\$63.06	\$85.82	\$5,226.88
	Subtotal Subcontractor Krazan Inspection Labor					\$5,226.88
	29% Markup on Labor					\$1,515.80
	<b>Total Subcontractor Krazan Inspection Labor</b>					<b>\$6,742.68</b>
Item Description	Qty.	Unit	Unit Price	Total		
<b>Equipment</b>						
Pickup, 4x2, 3/4 Ton, Gas	90.0	HOUR	\$14.93	\$1,343.70		
	Subtotal Subcontractor Krazan Inspection Equipment					\$1,343.70
	21% Markup on Equipment					\$282.18
	<b>Total Subcontractor Krazan Inspection Equipment</b>					<b>\$1,625.88</b>
	Subtotal Subcontractor Krazan Inspection					\$8,368.55
	12% Prime Markup					\$1,004.23
	<b>Total Subcontractor Krazan Inspection</b>					<b>\$9,372.78</b>

**Notes:**

Labor and Equipment hours assume 9 shifts to complete the Work. Labor rates were obtained from Subcontractors' certified payrolls, which are assumed to be correct. Equipment rates are from the Rental Rate Blue Book, which is assumed to be correct.

**Contract 008952**  
**CHANGE ORDER NO. 28**  
**COST ESTIMATE**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

<b>Std. Item</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
6896	Temporary Pavement Marking-Long Duration	24,245	L.F.	\$0.66	\$16,001.70
6809	Profiled Plastic Line (HOV Lane Line)	3,297	L.F.	\$1.80	\$5,934.60
<b>Total Subcontractor Specialized Pavement Markings</b>					<b>\$21,936.30</b>

**Notes:**

Unit pricing for Temporary Pavement Marking and Profiled Plastic Line are based on low bids from Northwest Region contracts awarded from August 19, 2018 through August 19, 2019.

**Contract 008952**  
**CHANGE ORDER NO. 28**  
**ESTIMATE WITH FORCE ACCOUNT**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

<b>Item Description</b>	<b>Total</b>
Design-Builder Atkinson Construction	\$9,942.99
Subcontractor Advanced Traffic Control	\$76,886.10
Subcontractor Acme PCCP Grinding	\$399,810.71
Sweeping Subcontractor	\$6,125.66
Subcontractor Krazan Inspection	\$9,372.78
Subcontractor Specialized Pavement Markings	\$21,936.30
WSDOT Independent Estimate	\$524,074.54
Contractor's Cost Proposal	\$546,027.17
Percent Difference	4.19%

<b>Total Amount This Change Order</b>	<b><u>\$546,028.00</u></b>
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**Contract 008952**  
**CHANGE ORDER NO. 28**  
**COST ESTIMATE**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

<b>Item Description</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
Foreman	90.0	HOUR	\$54.47	\$4,902.30
			29% Markup on Labor	\$1,421.67
			<b>Total Design-Builder Atkinson Labor</b>	<b>\$6,323.97</b>
<b>Item Description</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
Pickup, F450, Gas	90.0	HOUR	\$23.45	\$2,110.50
			21% Markup on Equipment	\$443.21
			<b>Total Design-Builder Atkinson Equipment</b>	<b>\$2,553.71</b>
			Subtotal Design-Builder Atkinson	\$8,877.67
			12% Prime Markup	\$1,065.32
			<b>Total Design-Builder Atkinson</b>	<b>\$9,942.99</b>

**Notes:**

Labor and Equipment hours assume 9 shifts to complete the Work. Labor rates are based on the Design-Builder's certified payrolls. Equipment rates are from the Rental Rate Blue Book. Traffic Barrel rates are from online rental vendor Sunbelt Rentals.

**Contract 008952**  
**CHANGE ORDER NO. 28**  
**COST ESTIMATE**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

Item Description	ST	OT	Unit	ST	OT	Total
Traffic Control Supervisor	90.0	18.0	HOUR	\$54.47	\$74.50	\$6,243.30
Traffic Control Laborer	90.0	13.5	HOUR	\$47.95	\$64.94	\$5,192.19
Traffic Control Laborer	90.0	13.5	HOUR	\$47.95	\$64.94	\$5,192.19
Traffic Control Laborer	90.0	13.5	HOUR	\$47.95	\$64.94	\$5,192.19
Traffic Control Laborer	90.0	13.5	HOUR	\$51.48	\$70.02	\$5,578.47
Traffic Control Laborer	90.0	13.5	HOUR	\$51.48	\$70.02	\$5,578.47
Traffic Control Laborer	90.0	13.5	HOUR	\$51.48	\$70.02	\$5,578.47
Subtotal Subcontractor Advanced Traffic Control Labor						\$38,555.28
29% Markup on Labor						\$11,181.03
<b>Total Subcontractor Advanced Traffic Control Labor</b>						<b>\$49,736.31</b>
Item Description	Qty.	Unit	Unit Price	Total		
Pickup, 4x2, 3/4 Ton, Gas	103.5	HOUR	\$14.93	\$1,545.26		
Pickup, 4x2, 3/4 Ton, Gas	103.5	HOUR	\$14.93	\$1,545.26		
Pickup, 4x2, 3/4 Ton, Gas	103.5	HOUR	\$14.93	\$1,545.26		
Pickup, 4x2, 3/4 Ton, Gas	103.5	HOUR	\$14.93	\$1,545.26		
Truck Mounted Attenuator	90.0	HOUR	\$5.64	\$507.60		
Truck Mounted Attenuator	90.0	HOUR	\$5.64	\$507.60		
Portable Changeable Message Sign	90.0	HOUR	\$7.83	\$704.70		
Portable Changeable Message Sign	90.0	HOUR	\$7.83	\$704.70		
Traffic Barrel (2 week rental)	160.0	EACH	\$24.00	\$3,840.00		
Traffic Barrel Weight (2 week rental)	160.0	EACH	\$24.00	\$3,840.00		
Subtotal Subcontractor Advanced Traffic Control Equipment						\$16,285.62
21% Markup on Equipment						\$3,419.98
<b>Total Subcontractor Advanced Traffic Control Equipment</b>						<b>\$19,705.60</b>
Subtotal Subcontractor Advanced Traffic Control						\$69,441.91
12% Prime Markup						\$3,000.00
10% Prime Markup						\$4,444.19
<b>Total Subcontractor Advanced Traffic Control</b>						<b>\$76,886.10</b>

**Notes:**

Labor and Equipment hours assume 9 shifts to complete the Work. Labor rates are based on the Subcontractor's certified payrolls. Equipment rates are from the Rental Rate Blue Book. Traffic Barrel rates are from online rental vendor Sunbelt Rentals.



**Contract 008952**  
**CHANGE ORDER NO. 28**  
**COST ESTIMATE**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

<b>Item Description</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
Operator Foreman	90.0	HOUR	\$83.56	\$7,520.40
Laborer	90.0	HOUR	\$59.80	\$5,382.00
Operator	90.0	HOUR	\$81.49	\$7,334.10
Truck Driver	90.0	HOUR	\$74.16	\$6,674.40
Truck Driver	90.0	HOUR	\$74.16	\$6,674.40
			Subtotal Subcontractor Acme Labor	\$33,585.30
			29% Markup on Labor	\$9,739.74
			<b>Total Subcontractor Acme Labor</b>	<b>\$43,325.04</b>
Pavement Miller	90.0	HOUR	\$582.19	\$52,397.10
Water Trailer	90.0	HOUR	\$27.29	\$2,456.10
Water Truck	90.0	HOUR	\$36.26	\$3,263.40
Semi Truck	90.0	HOUR	\$75.20	\$6,768.00
Pickup	90.0	HOUR	\$14.93	\$1,343.70
			Subtotal Subcontractor Acme Equipment	\$66,228.30
			21% Markup on Equipment	\$13,907.94
			<b>Total Subcontractor Acme Equipment</b>	<b>\$80,136.24</b>
			Subtotal Subcontractor Acme for One Diamond Grinding Operation	\$123,461.28
			Subtotal Subcontractor Acme for Three Diamond Grinding Operations	\$370,383.84
			12% Prime Markup up to \$25,000	\$3,000.00
			10% Prime Markup \$25,000 to \$100,000	\$7,500.00
			7% Prime Markup over \$100,000	\$18,926.87
			<b>Total Subcontractor Acme</b>	<b>\$399,810.71</b>

**Notes:**

Labor and Equipment hours assume 9 shifts to complete the Work. Labor rates are based on Subcontractors' certified payrolls. Equipment rates are from the Rental Rate Blue Book. Equipment and production rates were unavailable for diamond grinders, so rates for a pavement miller, semi truck and water trailer were used instead. The Contractor plans to use three simultaneous diamond grinding operations during each shift.

**Contract 008952**  
**CHANGE ORDER NO. 28**  
**COST ESTIMATE**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

<b>Item Description</b>	<b>Qty.</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
Operator	40.5	HOUR	\$81.49	\$3,300.35
			Subtotal Subcontractor Acme Labor	\$3,300.35
			29% Markup on Labor	\$957.10
			<b>Total Subcontractor Acme Labor</b>	<b>\$4,257.45</b>
Broom Truck	40.5	HOUR	\$24.73	\$1,001.57
			Subtotal Subcontractor Acme Equipment	\$1,001.57
			21% Markup on Equipment	\$210.33
			<b>Total Subcontractor Acme Equipment</b>	<b>\$1,211.89</b>
			Subtotal Sweeping Subcontractor	\$5,469.34
			12% Prime Markup up to \$25,000	\$656.32
			<b>Total Sweeping Subcontractor</b>	<b>\$6,125.66</b>

**Notes:**

Labor and Equipment hours assume 9 shifts to complete the Work. Labor rates are based on Subcontractors' certified payrolls. Equipment rates are from the Rental Rate Blue Book. Sweeping is estimated to take 4.5 hours per diamond grinding shift.

**Contract 008952**  
**CHANGE ORDER NO. 28**  
**COST ESTIMATE**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

Item Description	ST	OT	Unit	ST	OT	Total
<b>Labor</b>						
Inspector	72.0	8.0	HOUR	\$63.06	\$85.82	\$5,226.88
Subtotal Subcontractor Krazan Inspection Labor						\$5,226.88
29% Markup on Labor						\$1,515.80
<b>Total Subcontractor Krazan Inspection Labor</b>						<b>\$6,742.68</b>
Item Description	Qty.		Unit	Unit Price		Total
<b>Equipment</b>						
Pickup, 4x2, 3/4 Ton, Gas	90.0		HOUR	\$14.93		\$1,343.70
Subtotal Subcontractor Krazan Inspection Equipment						\$1,343.70
21% Markup on Equipment						\$282.18
<b>Total Subcontractor Krazan Inspection Equipment</b>						<b>\$1,625.88</b>
Subtotal Subcontractor Krazan Inspection						\$8,368.55
12% Prime Markup						\$1,004.23
<b>Total Subcontractor Krazan Inspection</b>						<b>\$9,372.78</b>

**Notes:**

Labor and Equipment hours assume 9 shifts to complete the Work. Labor rates were obtained from the Design-Builder's certified payrolls, which are assumed to be correct. Equipment rates are from the Rental Rate Blue Book, which is assumed to be correct.

**Contract 008952**  
**CHANGE ORDER NO. 28**  
**COST ESTIMATE**

**Segment 1 Friction Grinding**  
**Prepared by Brendan Byron**

<b>Std. Item</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
6896	Temporary Pavement Marking-Long Duration	24,245	L.F.	\$0.66	\$16,001.70
6809	Profiled Plastic Line (HOV Lane Line)	3,297	L.F.	\$1.80	\$5,934.60
<b>Total Subcontractor Specialized Pavement Markings</b>					<b>\$21,936.30</b>

**Notes:**

Unit pricing for Temporary Pavement Marking and Profiled Plastic Line are based on low bids from Northwest Region contracts awarded from August 19, 2018 through August 19, 2019.