

#### Memorandum

October 7, 2014

OCT 1 4 2014

**>**T0:

J. Carpenter / M. Fleming

THRU:

D. Whitehouse B. White

FROM:

W. Smith / K. Vaughn

SUBJECT:

Contract 8127 - Snowshed to Keechelus Dam Phase 1C

State Project

Change Orders 107 through 109 - "Wall 7 Vic. Final Plans"

Please find attached the State Construction Office approved and executed Change Orders No. 107 through 109 for this project.

**Description of the Change:** The constructability issues associated with Wall 7 have been well documented in previous change orders. Change Orders 67 and 74 provided for the Contractor to collaborate with WSDOT in redesigning portions of the project to allow the project to move forward without the as-bid Wall 7. Change Order 91 followed those change orders and: deleted Walls 5, 6, 7, 23, and the Slide Curve Bridge; added new items to address temporary roadway construction near Wall 7, construct the temporary Wall 707 Shoring Wall, and Geosynthetic Retaining Wall 707; and modified multiple items for the early 2014 construction season. Change Order 100 added construction work that took place in the mid to late 2014 construction season.

These three change orders (due to the limited number of items that CCIS will allow per change order), formally accept the "All Addenda Incorporated with CRIP and Wall 7 Revision" contract plans and provisions, replacing the "All Addenda Incorporated with CRIP" contract plans as the current contract plans and provisions for construction. Construction related work included in this change order includes revisions of some item quantities, deletions of others, and some added items. A major item added by this change order is an equitable adjustment for an increased overhead rate, indirect and/or overhead costs associated with deleted work and an equitable adjustment for a subcontractor, associated with deleted work.

**Evolution of the Change:** During the 2012 and 2013 construction seasons the Contractor attempted to construct Soil Nail Wall 7 in accordance with the contract as bid. Drastic overruns in grout quantities were encountered as a result of unanticipated voids in the subsurface material. Grout quantities on average consistently exceeded 250% of neat line quantities and in some cases exceeded 2000% of plan. These problems continued through the summer of 2013, with no improvement or solution in sight, despite exhausting many different attempts to solve the problem.

Compounding the problems with quantity, were a couple of Environmental Compliance Assurance Process (ECAP) violations in August and September of 2013. See also the change order memorandums for Change Orders 67, 74, and 91 for more detail.

This is the third change order which provides for physical construction of the new design. Ideally, all aspects of the new design would have been incorporated into one change order; however, in order to enable construction activities to progress without further delay, the decision was made to write multiple change orders representing progressive "stages" at which new plans would be available as a part of each of these change orders.

A subsequent change order will address the following: 1) remaining added and deleted items whose pricing haven't yet been negotiated, 2) potential adjustments to contract time and the effects thereof, 3) adjustments to existing lump sum items (may include; CRIP Item 411, Shoring or Extra Excavation Class A, Structure Surveying, and other work).

Entitlement: Due to the elimination of the construction of the as-bid Wall 7, Wall 23, Slide Curve Bridge, and associated work, together with the replacement of this work with the Wall 7 Re-design, the Contractor is entitled additional compensation as described in Section 1-04.4 for the added and modified work. Where appropriate, unit contract prices were used and quantities adjusted for the added or modified work. However, much of the work differed and replacement/new items were developed with negotiated unit prices as per Section 1-04.4. The Contractor is also entitled, as per Section 1-09.5 to an equitable adjustment due to the deleted work. The equitable adjustment provided by this change order compensates for costs incurred by the Contractor (and subcontractors DBM and Elcon) in anticipation of the deleted work and settles outstanding claims for additional compensation. This equitable adjustment also covers the anticipated contribution of the deleted work to the Contractors indirect costs and overhead as allowed per the contract.

#### Price:

The project office has prepared an independent engineer's estimate of the costs to perform the work described in this change order; it can be found in the project offices' change order file.

<u>Contract Time</u>: There is no change to contract time associated with this change order; this will likely be a subject for a subsequent related change order.

Please contact Will Smith, at (509) 577-1844, if you have any questions or comments.

WS:kv

Enclosures: Change Order 107, 108, 109, Checklists. Engineer's Estimate cc: Change Order File

### WASHINGTON STATE DEPARTMENT OF TRANSPORTATION CHANGE ORDER

DATE: 09/25/14 Page 1 of 3

CONTRACT NO:

DATE

008127

FEDERAL AID NO:

CONTRACT TITLE:

1-30,

I-90, SNOWSHED TO KEECHELUS DAM PHASE 1C - REPLACE

**CHANGE ORDER NO:** 

108

WALL 7 VIC-FINAL PLANS 2/3

PRIME CONTRACTOR:

GUY F. ATKINSON CONSTRUCTION, LLC.

707 SOUTH GRADY WAY STE 500

RENTON

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

WA

98057-3224

( ) Change proposed by Contractor		
ENDORSED BY:	SURETY CONSENT:	
CONTRACTOR CONTRACTOR	ATTORNEY IN FACT	
10/03/14		

ORIGINAL CONTRACT AMOUNT: 177,144,342.66
CURRENT CONTRACT AMOUNT: 182,954,183.35
ESTIMATED NET CHANGE THIS ORDER: 993,557.70
ESTIMATED CONTRACT TOTAL AFTER CHANGE: 183,947,741.05

Approval Required: ( ) Region

( ) Olympia Service Center

DATE

( ) Local Agency

APPROVAL RECOMMENDED ( ) EXECUTED	EXECUTED:
PROJECT ENGINEER	STATE CONSTRUCTION ENGINEER
10/7/14 DATE	10-15- 2014 DATE
APPROVAL RECOMMENDED ( ) EXECUTED	OTHER APPROVAL WHEN REQUIRED
REGIONAL ADMIN.  W. Brian White	SIGNATURE
BY:	SIGNATURE DATE
DATE	REPRESENTING

## WASHINGTON STATE DEPARTMENT OF TRANSPORTATION CHANGE ORDER

DATE: 09/25/14 Page 2 of 3

**CONTRACT NO:** 008127

**CHANGE ORDER NO: 108** 

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:

Due to system limitations with WSDOT"s Construction Contracts Information System (CCIS), this change order cannot be processed by a single change order. Change Order 107 will be the first of three (3) linked change orders addressing the same change. Change Order 107 will address the change text and added items, Change Order 108 will address increased quantities and Change order 109 will address reduced quantities and deleted items.

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION CHANGE ORDER

DATE: 09/25/14 Page 3 of 3

CONTRACT NO: 008127			CHANGE ORDER NO: 108				
ITEM NO	GROUP NO	STD	ITEM DESCRIPTION	UNIT MEASURE	UNIT PRICE	EST QTY CHANGE	EST AMT CHANGE
0003	01		CLEARING	ACRE	230,000.00	0.10	23,000.00
0032	01	0380	ROCK SLOPE SCALING	CRHR	475.00	150.00	71,250.00
0033	01	0470	EMBANKMENT COMPACTION	C.Y.	2.00	124,120.00	248,240.00
0037	01	1054	GRATE INLET TYPE 2	EACH	2,150.00	11.00	23,650.00
0039	01	1058	DROP INLET TYPE 1	EACH	4,500.00	2.00	9,000.00
0046	01	1086	QUARRY SPALLS	TON	20.00	495.00	9,900.00
0047	01		ROCK FOR EROSION AND SCOUR PROTECTION, CL	TON	25.00	335.00	8,375.00
0053	01	1160	UNDERDRAIN PIPE 6 IN. DIAM.	L.F.	9.50	8,222.00	78,109.00
0056	01	1170	DRAIN PIPE 6 IN. DIAM.	L.F.	10.00	413.00	4,130.00
0072	01		MODIFIED CATCH BASIN TYPE 2 84 IN. DIAM.	EACH	6,000.00	2.00	12,000.00
073	01		MODIFIED CATCH BASIN TYPE 2 96 IN. DIAM.	EACH	7,200.00	1.00	7,200.00
0079	01	3542	SCHEDULE A STORM SEWER PIPE 18 IN. DIAM.	L.F.	54.00	1,417.00	76,518.00
080	01	3543	SCHEDULE A STORM SEWER PIPE 24 IN. DIAM.	L.F.	70.00	216.00	15,120.00
0117	01		SURFACE AGING TREATMENT	S.Y.	8.00	6,489.00	51,912.00
0119	01		GEOMEMBRANE	S.F.	0.60	93,117.00	55,870.20
183	01	5683	TIE BAR WITH DRILL HOLE	EACH	15.00	215.00	3,225.00
196	01	6514	LONGITUDINAL JOINT SEAL	L.F.	4.00	2,014.00	8,056.00
208	01		MULCHING WITH HECP TYPE 1 MULCH	ACRE	3,400.00	0.40	1,360.00
210	01	6412	SEEDING AND FERTILIZING	ACRE	3,800.00	0.10	380.00
0211	01		SEEDING	ACRE	500.00	0.30	150.00
0212	01		TOPSOIL TYPE A	ACRE	50,000.00	0.80	40,000.00
227	01	6760	BEAM GUARDRAIL TRANSITION SECTION TYPE 21	EACH	3,800.00	3.00	11,400.00
228	01		BEAM GUARDRAIL TYPE 31 NON-FLARED TERM.	EACH	3,000.00	2.00	6,000.00
235	01		CONC. BARRIER TRANSITION CIP TO 42 IN. 2	EACH	2,500.00	8.00	20,000.00
254	01	6813	GROOVED PLASTIC LINE	L.F.	3.00	2,484.00	7,452.00
255	01		GROOVED PLASTIC SPLATTER LINE	L.F.	3.00	2,484.00	7,452.00
258	01	6889	RECESSED PAVEMENT MARKER	HUND	3,200.00	0.60	1,920.00
284	01		ELECTRICAL VAULT TYPE 575	EACH	3,500.00	1.00	3,500.00
286	01		ELECTRICAL VAULT TYPE 3642	EACH	3,500.00	1.00	3,500.00
296	01	7006	STRUCTURE EXCAVATION CLASS B INCL. HAUL	C.Y.	8.00	626.00	5,008.00
297	01	7008	SHORING OR EXTRA EXCAVATION CLASS B	S.F.	0.50	6,127.00	3,063.50
299	01	7014	GRAVEL BACKFILL FOR DRAIN	C.Y.	33.00	175.00	5,775.00
0313	01	9602	ADJUST INLET	EACH	500.00	4.00	2,000.00
0341	01	7550	CONSTRUCTION GEOTEXTILE FOR UNDERGROUND D	S.Y.	2.00	9,689.00	19,378.00
0510	01		CO 99-HMA CL 1/2 IN. PG 64-22	TON	86.00	1,734.00	149,124.00
0516	01		CO#100-WALL 707 CABLE FENCE	L.F.	90.00	6.00	540.00

993,557.70

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